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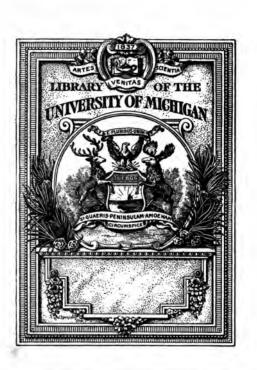
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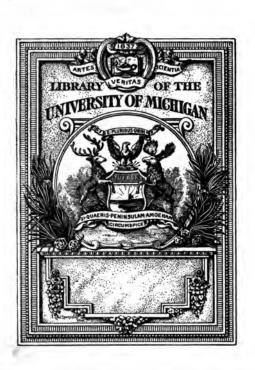


RHYTHMICAL GYMNASTICS

MARY S. THOMPSON

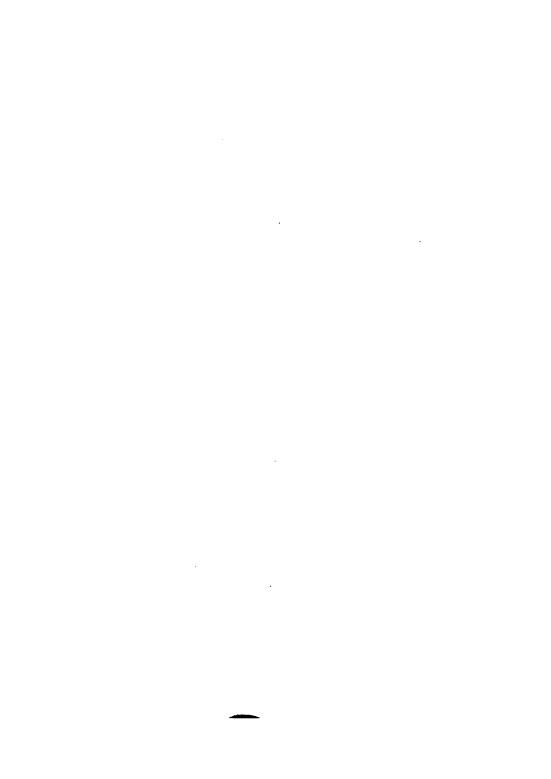


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Rhythmical Gymnastics

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VOCAL AND PHYSICAL

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MARY S. THOMPSON



NEW YORK
EDGAR S. WERNER
1892

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PREFACE.

O many people have lived before us, have lived and labored so industriously, that it must seem a difficult task indeed to say aught that is new on any theme. Yet, as no instrument, save the violin, has reached perfection, and as all art is necessarily progressive, it behooves those who wish to retain an advanced position to summarize that which is already done, to reject that which experience shows to be useless, and to present such original views as are of proved efficacy.

The system which is here presented is mainly founded upon the instructions received from the following eminent masters, to whom I gladly pay tribute: Lewis B. Monroe, Robert R. Raymond, Charles A. Guilmette, Alexander Graham Bell, George L. Osgood, and James Steele Mackaye; men who have devoted, each, a lifetime of zealous labor to this beautiful art of expression in voice and movement.

I also desire here to express my warm gratitude for the great encouragement and opportunity afforded for the practice and development of this art at my hands, by Mrs. Sylvanus Reed, the Misses Graham, and the late Mrs. Vincenzo Botta, whose kindness and sympathy were untiring.

I am also indebted to Samuel R. Elliott, M. D., of this city, for his professional sanction as to the safety and utility of the exercises herein embodied, and for his kind permission to use extracts from two lectures delivered before my classes at the Woman's Exchange.

MARY S. THOMPSON.

New York, 1892.



CHAPTER I.

INTRODUCTION.

IT is my purpose in this book to give exercises only,—
to prepare the instrument for interpretation.

It may, therefore, be used, with benefit, by all classes of people, whether in public or private life.

One of the most eminent members of the clerical profession once said to me: "I would be so glad to correct many faults in my vocal production, thereby saving my voice and strength; but you elocutionists will interpret the Scripture for me, instead of training me not to grow hoarse, and not to speak so rapidly that no one can understand me."

Long experience as instructor of children and adults, professionals and the laity, has brought me to the conviction that the first training should be such as to give complete control of the muscles before anything like grace of movement or beauty of tone can be expected. There are specially endowed beings, whose grace and voice were gifts from Heaven; but the great living mass of human beings are full of faults that need correction, before the true soul, behind this wall of cast-iron muscles, can shine forth in expression. As well ask Sarasate to interpret himself upon a cracked, half-strung, ill-tuned violin, as to expect the

human soul to triumph over non-used, or ill-used, muscles. Grace of movement and beauty of voice depend upon the correct use of the muscular apparatus concerned in their production. There need be no fear that training will crush out individuality, or destroy spontaneity. Each person has his own habitual bearing, or carriage of the body, his own quality of voice, both of which are the outcome of his temperament, modified by the accidents of life, his occupation and habits.

The quality of a voice is determined by the form or shape of the opening through which it passes. If the throat is large, the resonance-chamber large, and the mouth-cavity wide rather than high, we may expect a fuller quality of tone,—a contratto or basso; whereas, if the sound-cavities are small, high and narrow, we may expect lighter quality of tone,—sopranos or tenors. Yet do not be deceived by the outward conformation. Most of the tenors are stout, with large necks and large chests; while many bassos are thin, long-necked, and, comparatively speaking, narrow-chested.

The sympathy, or feeling quality of a voice, has to do with temperament, as has the type of movement, or attitude of the human body. All faults of voice or movement, resulting from wrong use of the muscles, can be removed by patient practice. No one need speak nasally or harshly. No one need scream his thoughts or feelings in a thin, resonant and high-pitched voice; nor yet whine his discontent through tight-shut teeth. In brief, every one should be able

to speak his own, or any language known to him, with the purity of faultless utterance. No one need stand, sit, or walk awkwardly. Grace is the result of equilibrium; equilibrium results from perfect balance, or poise. Careful practice will remove the faults of the most awkward. Nature is often cruel and insistent. Art, her twin sister, steps in, with deft touch, to modify nature, to defy the ravages of time and the influence of bad habits. The passé beauty, in Congreve's "Way of the World," sits before her mirror, with paint and cosmetics. Beside the mirror she places a portrait of herself at sixteen: "A little art once made my picture like me; a little art now makes me like my picture. Once I sat for my picture, and now my picture sits for me."

CHAPTER II.

A PLEA FOR MUSCULAR DEVELOPMENT WITHOUT AP-PARATUS.

QOME thirty years ago the athletic world was startled by the performances of a Dr. Winship, of Boston, a recent graduate of Harvard, who had taken up gymnastics, then comparatively but little practiced, as a means of recruiting a shattered constitution. He brought to the subject much zeal and originality. Among other innovations, he introduced the practice of lifting in harness. His feats in lifting by means of strength thus artificially obtained, surpassed the "records" of his predecessors; but there was always some dark story of sudden attacks of faintness, and other evidences of unbalanced health. He fainted dead away, twice, at his exhibitions in New York; and the manner of his early death confirmed the impression that his nervous system was exhausted by strain, and that his method was more sensational than sound.

Let us look into the method which brought these results. First, he used nothing but very heavy weights, asserting that it was better to lift a hundred pounds once than ten pounds many times.

Since his death, his record of achievement has, in turn, been broken so often, that it is nearly forgotten; while the systems of those who succeeded and surpassed him have advanced in intelligence and effectiveness, till the enormous weight of three thousand pounds During this time the has been lifted with ease. weights used by these athletes have steadily diminished, until the hundred pound dumb-bell of Winship has been replaced by little more than a pair of oyster Briefly, it has been found that what the shells. pupil attained by an exclusively meat diet and heavy weights, is not natural or wholesome strength, but is lacking in endurance, and purchased at the expense of vitality.

It has long been noticed that professional athletes of the old school, fed on beef and water and trained with heavy and cumbersome apparatus, seldom lived past early middle life; a result due to pernicious diet and straining. They usually died from disease of the lungs. Hence, it is argued that to effect the best results in symmetry, strength, endurance, and cheerful healthfulness, the less apparatus the better.

CHAPTER III.

MUSCULAR EXERCISES COMBINED WITH BREATHING.

EXERCISE I.

REST the hands easily upon the chest, allowing the elbows to fall flexibly at the sides. Gradually raise the elbows to a level with the shoulders, being careful to avoid raising the shoulders. Inhale during this movement. Draw the elbows gently backward in this line until the shoulder-blades shall seem almost to touch. Gradually lower the elbows by a circular movement until they return to their original position. Exhale during this movement.

This exercise develops not only the muscles of the chest, but also those of the back between the shoulders, thus correcting a tendency to hollowness of the back, prevalent in those of a consumptive tendency.

EXERCISE II.

Rest the thumbs in the armpits, the palms on the upper ribs, or costal muscles. Allow the elbows to fall forward, being careful to avoid raising the shoulders. Inhale during this movement. Gently draw the elbows backward as far as possible without lifting them. When drawn backward as far as possible, allow

them to spring or suddenly relax to their first position. Exhale during this movement.

This exercise gradually strengthens and develops the pectoral muscles.

EXERCISE III.

Rest the palms on the false ribs; pass the palms backward in a direct line to the spinal column, rotating the hands until the thumbs come downward along the spinal muscles and the fingers touch the spinal column. Inhale during this movement. Then reverse the movement, passing the hands to the front, rotating the palms until the thumbs come uppermost and the palms embrace the false ribs as before. Exhale during this movement.

This exercise strengthens the muscles of the chestcavity, back, front and sides, developing the muscles so that they unconsciously hold the body in position without the aid of a corset or other artificial support.

EXERCISE IV.

Clasp the body with the hands at the waist-line, thumbs back, fingers forward, being sure to rest the hands below the ribs at the waist-line proper. Compress the waist as much as possible with the hands, then gently expand the waist-muscles laterally to the fullest extent, pressing against the hands as though to burst a belt. Inhale during this movement. Reverse the position of the hands, clasping the waist

with thumbs forward and fingers resting upon the back. Gently expand the muscles of the back under pressure of the finger-tips. Inhale during this movement.

This exercise strengthens the muscles at the small of the back, and is especially useful in correcting a tendency to what is known as lumbago or backache.

EXERCISE V.

Rest the palms of the hands, thumbs stretched back, finger-tips touching, upon the abdomen; project the elbows slightly forward. Gradually and gently press the palms against the abdomen while drawing the abdominal muscles in as far as possible. Inhale during this movement. Allow the muscles to relax easily and with a gentle spring to their original position. Exhale during this movement.

This exercise corrects a tendency to excess of fat in the abdominal region and a consequent relaxing of the abdominal muscles.

CHAPTER IV.

BREATHING, WITH ARM MOVEMENTS.

EXERCISE I.

PAISE the arms in Feather Movement, as described in "Society Gymnastics," * until over the head; turn the wrist until the tips of the fingers join. Inhale throughout this movement. Part the fingers and bring the arms down on each side, stretched full length, palms up, until the wrists are on a level with the shoulders. Exhale throughout this movement.

Carry the arms back from this position until the finger-tips touch again over the head. Inhale during this movement. Turn the hands on wrists, and bring arms down to the sides in Feather Movement. Exhale during this movement.

EXERCISE II.

Take the Delsarte Spiral Movement of the arms. Inhale on the upward movement; exhale on the downward movement. Repeat three times.

^{* &}quot;Society Gymnastics," by Genevieve Stebbins. Edgar S. Werner, Publisher, New York.

EXERCISE III.

Take the Delsarte Serpentine Movement. Inhale until the finger-tips touch the shoulder; exhale from that point until the arms reach their original position. Repeat three times.

EXERCISE IV.

Take the Delsarte Directing Movement. Inhale throughout the movement; exhale while swinging the arms back to their first position. Repeat three times.

CHAPTER V.

- BREATHING TO MUSIC.

In my observations of both voice and movement, I have found the element of time a strong factor in the power of continuity and also of consecutive purposeful interpretation. Therefore, I have devised these exercises for breathing in exact time to music, in order that the very muscles and breath should gain the habit of acting rhythmically and automatically in harmony with the mind and feelings, so that the result of this conscious practice may be that of unconscious action when the time comes for interpretation, that the artist may feel sure of his instrument, that he may know it to be in tune and that it will respond to all shades of feeling, that he may enjoy the luxury of abandoning himself to interpretation or expression with no thoughts of mechanism.

Breath and its management is at the foundation of voice-production. Its perfect management through every thought, emotion and passion of the human being, as evidenced in song or speech, is an art which must be thoughtfully studied and practiced. Breathing as required by art is a matter of action, not of rest; therefore, the direction to "breathe nat-

urally" is open to misunderstanding, and might be supposed to refer to the breathing of sleep—which is next to no breathing at all,—or to the breathing of perfect tranquillity or inaction, which is much the same thing. Whereas, to breathe naturally, if rightly comprehended, means to breathe as you would were such thoughts and emotions as are about to be portrayed swaying your entire being. Therefore, the muscles must be trained to respond instantly to the thought or feeling, and this result can be brought about only by practice, and varied practice.

I have found the greatest advantage in these exercises of breathing in exact time. A pupil who dragged the time, who, in short, had no sense of time and its vast importance in interpretation, who would make a dirge of a simple lullaby, or an ordinary every-day trot of the mad flight of Lochinvar,—that same pupil by the faithful practice of these exercises became markedly proficient in this very department, sense of time; and eventually rhythm of movement became an instinct with him.

This idea of breathing to music came to me from watching a musician whose strongest point was what the world calls "expression." With every change of movement or time his breathing varied. In short, he breathed his whole piece or selection in perfect time and in harmony with his interpretation.

"The beating of her heart was heard to fill The pauses of her music; and her breath Tumultuously accorded with those fits Of intermitted song." . Breathing to music in perfect time does away with all tense, muscular effort or strain in breathing. By accustoming the muscles to act with promptness and rhythm, the breath breathes itself, as it were, without straining or any sense of fulness or oppression.

The amount of breath to be used in tone and the frequency of its renewal must be apportioned to the movement of a piece; therefore, these exercises accustom the pupil to taking a proper amount of breath for each movement. As a means of health they have proved invaluable. They are especially efficacious in removing sluggishness of the system with a tendency to despondency. They remove also the extreme nervous tension and irritability of persons in perfect health, who need a regulated outlet for their nervous force, rather than a relaxation of breath and muscles. Enforced quiet or inaction, to such persons, is in the highest degree pernicious.

"Quiet to quick bosoms is a hell."

CHAPTER VI.

RHYTHMICAL BREATHING WITH MUSIC.

EXERCISE I.

QTAND, heels together, weight on balls of the feet. knees straight, chest easily held in normal position, hands lightly clasped in front at waist-line, so that the weight of the arms may not drag upon the chest-muscles and interfere with their flexible movement. Close the eyes in order to concentrate the attention wholly upon the exercise. Gradually lift the chest and expand all the muscles connected with breathing, at the same time allow the air to steal gently through the nose, and fill the lungs slowly. without effort or tension. Let it be more the mechanical entrance of air into the lungs resulting from the lifting and expanding of the muscular apparatus therein concerned. Do this most gently. The sensation should be that of a gentle expansion and uplifting of the whole torso, almost akin to floating.

When the lungs are filled, without pause gradually allow the muscles to relax, thus causing the breath to pass out through the nose slowly, without effort or tension. Repeat three times, being careful to make no pause between inhalation and exhalation.

This exercise is intended to prepare mind and muscles for concentrated, purposeful, artistic effort in the management of breath, preparatory to tone-production, and should be performed before the music begins. It is analogous to the tuning of instruments, preparatory to the concerted efforts of an orchestra.

EXERCISE II.

Take 2-4 time. Inhale through the nose, silently and gently, during the first measure. Exhale during the second; and so on, throughout the musical selection.

This exercise should be performed in all divisions of time, common and triple, simple and compound.

EXERCISE III.

Begin with 2-4 time. Inhale during first measure. Hold the breath during the second. Exhale during the third, and so on throughout any selection, holding the breath during alternate measures. Do this in perfect time, with flexible muscles.

Practice this exercise in every variety of time, common and triple.

EXERCISE IV.

Inhale silently through the nose during first measure. Breathe out gently through the mouth during two measures. Renew the breath exactly on time at the end of the first measure, and so on throughout a piece. Do this in every kind of time, common and

triple. Proportion the exhalation according to the time.

- In 2-4 time inhale on first measure a sufficient amount of breath to breathe out during two measures.
- 3-8 time. Inhale during first measure. Breathe out during three measures.
- 6-8 time. Inhale during first measure. Breathe out during six consecutive measures.
- 9-8 time. Inhale during first measure. Breathe out during nine measures.
- 12-8 time. Inhale during first measure. Exhale during twelve consecutive measures. Regulate the exhalation by the number of beats to a measure. Inhale at the end of each exhalation easily, promptly and in perfect time.

These exercises, if faithfully practiced, will give a calm, sustained continuity in the management of breath, preparatory to its use in tone-production.

Relaxing exercises in breathing should be taken at the end of this lesson for relief and rest of mind and muscles.

CHAPTER VII.

RELAXING EXERCISES FOR THE BODY.

EXERCISE I.

Relax the breathing-muscles and expel the breath in a forcible gush or sigh. Then take what might be called a stretching or uplifting breath, raising the shoulders, stretching the arms outward, then upward, then obliquely outward. Finally, relax, and let them fall, sending the breath out in a sigh.

EXERCISE II.

Alternate inspirations and expirations of breath in the form of indrawn and outgoing sighs. Pause after each expiration of breath and rest without breathing until the breath comes easily, of itself, as a relief, gently and comfortably, like an indrawn sigh followed by a soft outgoing sigh or murmur of breath.

EXERCISE III.

Relax the muscles. Take a tranquil breath through the nose with absolutely no muscular effort or thought of muscles. Exhale in the same effortless way. Pause without breathing after each exhalation. This is the natural, tranquil, effortless breathing which goes on in sleep and automatically during our entire lives. It is the breathing of a healthy baby, and evidences perfect tranquillity of mind and body; in short, rest.

Why breathe to music?

What the cadenced step is to an army on the march, imparting strength, joyousness and conscious rhythm, music is when used as an accompaniment to pantomime, pose, æsthetic gymnastics and even athletic sports, as noted in the prevalent practice of clubswinging to music. Breathing in perfect time to music imparts a rhythmical movement to the breathing-muscles.

The purpose in having music to accompany these exercises is that it acts upon the mind through the sense of hearing, filling it with the sentiment implied by the melody.

While, in the main, the selection of such morceaux as would seem most suitable should be left to the judgment of the instructor, it is well that I make a few suggestions for the benefit of those who do not number the art of music among their gifts. I subjoin for this purpose a few of the simpler and more melodious of the standard lyric dramas and well-known hymns.

For purely devotional effect: "Portuguese Hymn,"
"Russian National Hymn," "Bohemian Chant,"
"Nearer My God to Thee," "Jesus, Lover of My Soul."

For processional music: "Coronation March," from "Le Prophéte;" "March," from "Tannhäuser;" "Hymn of Pardon," from "Dinorah;" "Chorus of Archbishops," from "L' Africaine;" Mendelssohn's "Wedding March."

Gound's "Ave Maria" is an example of a devotional and somewhat rapturous utterance of the Latin religious, grafted on to a stately classic German theme, the first prelude of Bach.

"Casta Diva," from the opera of "Norma," is an example of barbaric ecstacy, mostly religious, with a commingling of human passion.

The "Waltz Song," in Gounod's "Romeo and Juliet," gives an impression of voluptuousness, a passion of joyous expectancy, with a faint suspicion of regret.

"Brindisi," from "Lucrezia Borgia," gives to the mind an air of youthful revelry, in which all care is cast aside, and all thought of the morrow dismissed to eternity.

Rubinstein's "Melody in F" is an admirable specimen of steady continuity, "without haste and without rest," and having melodic purpose.

CHAPTER VIII.

PLACING OR DIRECTING OF THE BREATH.

EXERCISE I.

INHALE through the nose. Rest the forefinger lengthwise upon the upper lip. Exhale through the nose, feeling the air diffuse itself in a thin continuous stream upon the finger.

Exercise II.

Inhale through the nose. Part the lips slightly, and exhale through the mouth, directing the column of air to the finger-tips held before the lips. Feel the breath diffuse itself against them in a continuous stream. Avoid sending any breath out through the nose.

EXERCISE III.

Inhale through the nose. Part the lips slightly. Exhale, directing the breath in a continuous stream against the wrinkles back of the upper teeth. Avoid sending it through the nose.

EXERCISE IV.

Inhale through the nose. Part the lips slightly. Diffuse the breath in a continuous stream over the

roof of the mouth. Be careful that no breath passes out through the nose, which may be held, as a test.

EXERCISE V.

Inhale through the nose. Close the mouth, and direct a continuous stream of air upon the soft-palate.

EXERCISE VI.

Inhale through the nose. Close the mouth. Hold the nose. Relax the breathing-muscles gradually. Direct the breath from the pharynx straight into the head, allowing it to diffuse itself there gently.

This exercise is very difficult and requires patient practice for its mastery. The sensation should be that of life throughout the head, even in the forehead, but most about the ears or Eustachian tubes, as the air passes out through the ears. This exercise has been found of great benefit for deafness caused by catarrh of the membrane, and seems to clear the head.

CHAPTER IX.

GRACE.

ALL barren and purposeless tugging and jerking movements are dangerous. All ungraceful and clumsy movements partaking of the nature of horseplay are liable to become so. Exercise is a good thing, but, as John Todd remarks in his "Student's Manual," "the exercise must be joyous and graceful. It must not be irksome to mind or body."

Students have gained and do gain greatly in health and strength by the habitual exercise of walking; and it is well known that dancers of all kinds, except jig dancers, are exceedingly healthy. The insurance companies rate a dancing-master, whose daily and hourly practice is grace of movement, among the longest-lived of men, and similar statistics assert that the treadmill, while admirable as a means of discipline and punishment, brings no added strength or health to its unwilling votaries.

The first "six days' go-as-you-please" at the Madison Square Garden was won by a man named O'Leary, of Chicago, who, while his health remained, had no competitor in this country. One morning, as he was taking an early stroll in the streets of Boston, he espied a colored boy of agile figure emerging from a gro-

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cery with a basket on his arm. Something in the grace and ease of the colored boy's movement attracted his attention. He remarked to his companion, "This is the only thing that can outwalk me!" With some difficulty he overtook the boy, and a few weeks later a din of many thousand voices proclaimed the soundness of his judgment, for this negro grocery-boy was now champion of the world, so far as known, and had been selected solely for his grace and ease of His chief opponent was an Irishman of movement. powerful frame; a trained, professional athlete, vastly his superior in strength, lung-power, and the habit of endurance. He lacked only the ease which comes with grace, and was easily defeated.

CHAPTER X.

MUSCULAR EXERCISES FOR THE LEGS.

EXERCISE I.

WEIGHT on the right foot; lift the left thigh, leg hanging flexibly from the knee, until hip and knee are on a line. Extend the leg, unbending the knee until the foot is on a level with the hip, toe pointed downward. Return to the original position, relaxing first the ankle, then the leg, finally, the thigh, until the foot rests easily upon the floor.

Transfer the weight to the left leg and repeat this exercise.

Exercise II.

Repeat the preceding exercise three times, bringing the foot lower each time, and pointing the toe downward, the third time touching the floor.

EXERCISE III.

Weight on right foot, lift left thigh until the knee is on a line with the hip, leg hanging flexibly from the knee. Straighten the leg until the toe points forward and downward; then, by a movement of the muscles at the knee, cross it forward over the right leg, toe pointed downward, three times in succession, without

touching the floor. Return to first position, heels together.

Transfer the weight to the left foot and repeat the exercise with the right foot.

EXERCISE IV.

Repeat the preceding exercise, crossing the leg backward, toe pointed downward.

EXERCISE V.

Weight on the left foot; lift the right knee to a level with the hip; carry it backward as nearly as possible on a line with the hip; unbend the knee and straighten the leg; extend it backward, the toe pointing downward.

This exercise may be performed gradually by lifting the thigh at first sufficiently to allow the foot to clear the floor, gradually increasing the height until the knee is on a level with the hip.

EXERCISE VI.

Weight on the left foot, the toes of the right foot resting lightly upon the floor. Rotate the thigh until the right knee is turned inward, right heel outward.

Reverse the rotation and repeat the exercise, being careful to feel the movement only in the thigh, leaving the leg and foot perfectly flexible.

EXERCISE VII.

Return to first position; heels together; take the weight on the right foot and repeat the preceding exercise.

EXERCISE VIII.

Weight on the left foot; rotate the right thigh until the knee is turned inward, the heel outward, foot pivoting upon the great toe; at the same time lift the thigh. Reverse the rotation, turning the knee outward, the heel inward, allowing the movement to steal gradually from the thigh to the leg, and finally to the very toes, which should be pointed downward. From this position carry the foot back to the original position by a circular movement, every muscle tense.

This exercise may be performed at various heights.

EXERCISE IX.

Seat yourself; lift the right thigh until the knee is on a level with the hip, the leg hanging flexibly; unbend the knee and extend the leg, pointing the toes downward, stretching every muscle gradually. Relax the muscles at the knee, allowing the leg to hang flexibly. Carry the knee higher by upward movement of the thigh, unbend it, pointing the toes on a level with the shoulder. Return to the original position by relaxing the muscles at the knee, then those of the thigh.

Repeat this exercise with the left leg.

This exercise may be varied by carrying the leg obliquely upward; also, by the rotary movement, as described.

CHAPTER XI.

MUSCULAR EXERCISES FOR THE ARMS.

EXERCISE I.

ET the arms hang easily at the sides; rotate the shoulders backward until the elbows are turned against the sides, the palms upward. Stretching every muscle to its utmost tension, slowly raise the arms at each side, palms upward, fingers together, stretched to their full length, thumbs set apart, stretched well backward until the wrists are on a level with the shoulders. With the arms in this position expand the hands to their utmost, stretching the fingers and thumbs as far apart as possible, three times in succession. With the hands in their original position, slowly lower the arms to the sides, every muscle stretched to its utmost tension. Relax all the muscles and allow the arms to return to their original position.

Repeat the preceding exercise, raising the arms directly in front of the body; also obliquely forward; also obliquely backward.

EXERCISE II.

Rotate the shoulders forward, turning the elbows forward and the palms backward. In this position lift the arms backward in the same way as described in Exercise I.

Exercise III.

Rotate the shoulders backward until the palms are turned upward, as in Exercise I.; slowly raise the arms at the sides, every muscle tense, stretched to its utmost, until the finger-tips touch, with the arms raised directly over the head, elbows perfectly straight, not bent. Carry the arms downward, every muscle tense, until the wrists are on a level with the shoulders, palms upward; from this position raise the arms over the head three times in succession, the last time lowering them to their original position. Relax easily to the normal position.

The result of these exercises is the perfect development of all the muscles of the arms without the use of apparatus. The objection to the lifting of weights for the development of the arms is that other muscles are called into play, principally those of the back and the abdominal region. A delicate pupil becomes fatigued thereby, instead of refreshed, at the close of the exercise.

The advantage of the preceding exercises is that they may be performed equally well in a standing, sitting, or recumbent position. The results from faithful practice of these exercises are amazing as regards the development of strength in the arms.

I am tempted here to give an illustration of the superior benefit of exercises without apparatus, as compared with those requiring apparatus. It came under my personal observation.

One of the most widely-known exponents of the

Delsarte System of Æsthetic Gymnastics was giving a lecture upon that subject, with personal illustrations, before a large class at perhaps the best-known institution in this country for physical development by means of apparatus. In the midst of her illustrations, the air seemed close, and she requested the privilege of Several exponents of the apparatus an open window. simultaneously attacked a window, which system proved refractory, and resisted all their combined Our lecturer paused in the flow of eloquence hitherto uninterrupted, and with a shade of annoyance at this interruption, stepped quickly to the window, with one movement of her arm lifted it, and resumed her place upon the platform and her eloquence. A little murmur of surprise brought to her unconscious sense the realization of a triumph for the system she was advocating. With a light laugh she called brief attention to the fact, that, while she owed all her development to a system without apparatus, and had never lifted weights in her life, yet with one arm she had lifted the refractory window which had defied the combined strength of those whose daily practice was the lifting of weights. It was only the old familiar story of the world's reluctance to associate grace or beauty with strength or utility, forgetting that the spiral is the strongest as well as the most beautiful line in mechanics; witness the screw. That curves resist even the force of the mightiest waves, witness a ship, which is built in curves.

[&]quot;Beauty is strength; strength, beauty."

CHAPTER XII.

RHYTHMICAL EXERCISES.

EXERCISE I.

FAND, heels together, weight on the balls of the feet, knees straight, hips drawn well backward, chest raised, arms hanging easily at the sides, shoulders square to the front, head erect, chin drawn backward. Rise on the toes slowly; take a deep, full breath through the nose as you rise. Descend slowly, taking care not to settle back on the heels. Breathe out slowly as you descend.

EXERCISE II.

Stand as in the preceding exercise. Clasp the hands flexibly behind you, arms hanging full length. Run to 2-4 time, taking a step for each beat or count. Inhale and exhale alternately through each measure.

EXERCISE III.

Extend the arms directly over the head, finger-tips touching, arms forming an arch over the head, which should be inclined slightly downward in opposition, chin drawn backward. Walk in this attitude, stepping in exact time to the music, a step for each beat. Vary the time from quick to slow, common or triple.

This exercise should be performed in exact time, taking great care to step at each count, or beat, with no halting or pause in the advance forward. If so practiced, it will give a perfect command over the muscles in continuous, sustained movement, and will do away with all unevenness of step, thus obviating jerky, bobbing movements.

Exercise IV.

Take a large floral jar, about a foot in height. Lift it to the head with both arms, and support it there, a hand on each side, one a trifle higher than the other. In this attitude walk in exact time, taking a step at each count, or beat. Let the time be slow,—march movement.

This exercise gives an erect carriage. Be sure to step in exact time with the music, making no pause between steps, but moving continuously, and making the turn in perfect, uninterrupted time.

Vary the exercise by stepping backward, instead of turning, when the end of the room is reached. Be careful to put the ball of the foot down first in making the backward movement.

CHAPTER XIII.

RECUMBENT EXERCISES.

EXERCISE I.

TRETCH yourself upon your back, full length on the floor, heels together, arms full length at the sides, both shoulder-blades touching the floor, face upward. In this position stretch every muscle to its utmost. Relax and repeat.

Exercise II.

Lying easily upon the back, rotate the head from side to side, gently and flexibly, without tension or jerkiness.

EXERCISE III.

Lift the right arm from the shoulder, fling it flexibly across the body. Withdraw to first position by movement of upper arm, no tension below the elbow. Repeat the exercise with the left arm.

EXERCISE IV.

Lift the right thigh, and fling the leg flexibly over to the left side. Repeat with the left thigh.

EXERCISE V.

Simultaneously fling the right arm and right leg over to the left side, at the same time rotating the head and body to the left until lying upon the face. Continue this movement, rolling over and over. Reverse the movement, thus returning to the starting-point.

EXERCISE VI.

Lying on the back, by the muscles of the thigh draw the right leg upward until the ball of the foot rests upon the floor. Relax the muscles of the thigh and allow the leg to resume the original position. Repeat with the left leg.

As I have said, nearly all the exercises given for the legs may be performed in a recumbent position. I have found them particularly advantageous to invalids and people not able to stand or walk.

The arm movements may also be performed in a recumbent position, with excellent results.

Accompany each of the preceding exercises by deep, tranquil breathing.

CHAPTER XIV.

EXERCISES FOR THE FACIAL MUSCLES

The the exercises given in this chapter must be practiced before a mirror, and most accurately, until the correct habit of doing them is fixed. Otherwise, they are liable to result in contortions of the face, ending in wrinkles, and defeating the object for which they are devised,—that of preserving the firmness of all the facial muscles by their right use, and thereby retaining and even restoring the soft, firm and flexible contours of youth.

EXERCISE I.

Take a hand-mirror; elevate the eyebrows gently and firmly, without wrinkling the forehead, and without raising the upper eyelids. Hold the eyebrows in position while counting three, then relax easily to the normal position.

Repeat this exercise three times. It is especially valuable in preventing or removing wrinkles at the corners of the eyes.

EXERCISE II.

Close the eyes, relaxing the upper lids as in sleep. Gradually open the eyes, lifting the upper lids until the white of the eye shows above the eyeballs. Do

not lift the eyebrows in this exercise. Hold the lids in position while counting three, then relax gently.

This exercise is valuable in correcting any tendency of the upper lids to droop, or grow thick or puffy. Repeat this exercise three times.

EXERCISE III.

Alternately distend and relax the nostrils without moving the upper lip.

Repeat this exercise three times. It corrects any tendency to pinched nostrils.

Exercise IV.

Distend the cheeks with air to their fullest capacity, keeping the mouth closed, but taking care not to pinch or wrinkle the lips, then relax.

Repeat this exercise six times. It strengthens the buccinator, or trumpeter's muscle, thus preserving the roundness and symmetry of the cheeks.

EXERCISE V.

Begin with relaxing all the muscles of the face to a facial blank, then centering the attention on the occiput or back of the head, slowly contract the occipito-frontalis muscle, which covers the scalp, until the forehead, eyebrows and temples are all more or less lifted and smoothed.

This exercise imparts the muscular habit of exalted expression,—what is called by the poets an uplifted countenance. Repeat three times.

It is useful in smoothing away all furrows and wrinkles, and removes any tendency to depressed, careworn lines or furrows in the face.

EXERCISE VI.

Close the lips, firmly but flexibly, without the least pressure or tension. Lift the corners of the mouth without straining or wrinkling the lips, being careful to avoid wrinkles at the corners of the eyes by slightly elevating the brows.

This exercise is for the purpose of preventing or correcting any tendency of the muscles to droop at the corners of the mouth. Repeat three times.

EXERCISE VII.

Slightly lift the eyebrows, avoiding any wrinkles. Close the lips flexibly, without tension. Lift the corners of the mouth, at the same time slightly distend the nostrils, and lift the cheeks until the expression becomes that of a half smile.

In practicing this exercise be careful to avoid all undue tension of muscle. In lifting the cheeks, the muscles contract slightly, which will give a feeling of tightening through all the facial muscles. All undue tension or rigidity must be carefully guarded against. The sensation should be that of lightening or lifting the whole face, and should be a pleasurable one.

The reflex action of this exercise upon the mind and spirit is wonderful.

CHAPTER XV.

THE INFLUENCE OF TONE.

"His voice, which shivered the mad trumpet's blare,
Now charms her blood with the fine touch of praise."

THERE are songs without words chanted in every household, whose hearers are enslaved, enrapt by the music of cadence, by the fine emotions imparted by tone, passing sometimes far beyond the reach of words into the temple of the soul. Collins has shown us how the Passions were swayed by tone, and the melody of a fine voice is one of the richest gifts to its possessor, and a perennial blessing to all who are within hearing of its magic.

Among the many ways of estimating character there is none more sure than that one which might be called the trial by voice. Much may be learned, indeed, by physiognomy, and quite reasonable estimates may be made by observing the figure, the gesture, the general movements of persons whose character and motives we wish to ascertain. Some experts claim to read a man's horoscope in his handwriting, and we are all more or less influenced by the cut and color of our neighbor's raiment. I knew one observant cynic who professed to be able to measure a man's moral worth by his way of carrying a cane; but all of these methods are apt

to be fallacious or misleading, as compared with the evidence furnished by the human voice.

Nature is so kind to all that is young, that physiognomy in inexperienced hands is prone to fallacy, while even Lavater himself admitted that he was frequently mistaken, because in the young the character had not had time to impress itself on the features and lines of the face.

It is different with the human voice. Here the appeal is made directly to the soul, and the hard, metallic voice, which even in a young man betrays shallowness and cruelty, is as perceptible and as offensive to the inexperience of childhood as to those of maturer years. There is no tone so fraught with pathos as the cry of a baby; all hearts become maternal at the sound, and ever watchful nature has provided the most helpless period of life with that which will secure the love and tenderness which it most needs, so that even the most worn and weary of mothers will find in the prattlings and cooings of infancy ample compensation for days of anxiety and for nights that brought no sleep.

The voice of mature manhood or womanhood is, when rightly used, beautiful in its strength, and of a kind to inspire confidence; while, in old age, the voice should reflect wisdom, dignity and magnanimity.

I think there is no part of the equipment with which we begin the battle of life so necessary to our success as a well-attuned, cultivated voice. Supplied with this credential, one may be, like Miles Standish, short of stature, harsh of feature, and ungainly of movement, and yet inspire confidence, and win love.

Marvelous are the tales which are told of the effects produced by certain singers. It was said of Pacchierotti, that, when he sang in opera, orchestra and chorus would stop to listen entranced by this marvelous music, somewhat to the confusion of the conductor. Similar stories are told of Pasta, Catalani, Farinelli, and, indeed, this phenomenon—a spell cast over the emotions—may be witnessed, in some degree, at the performance of any great artist.

The Italian singer, relying, as she does, mainly upon quality of tone, with brilliant execution, appeals principally to the lighter emotions, to the feelings of those to whom life and hope are new. The scheme of their performance is not usually very wide, and comprehends love, hate, despair, revenge, joyous ecstasy, as experienced by young or simple natures, seldom rising to religious fervor, and with no hint of the mystical. It is related of Mozart, that, when a child—and what a wonderful child he was!—he was wont to epitomize the Italian opera of that day by the singing of single words oft repeated to represent each scene. raptures of tenor and prima donna were expressed by The heavy villain—basso the words: "Io t'amo!" profundo-denounced his rival: "Ah! perfido!" while the inevitable priest invoked "Cielo!" at every given The Italian opera has advanced greatly opportunity. since that day, but I fear that its component parts have not greatly changed, and that life to them is a

pre-Raphaelite painting of gorgeous coloring, minute detail, but somewhat wanting in perspective.

German music, on the other hand, attempts far The mystic element, which pervades higher flights. the primitive literature of the Northland, has impressed itself upon Gothic art, and made itself strongly felt in the more ambitious German music. So many people believe that to be sublime needs only to be incomprehensible, that, in dealing with the mystic, many things will be accepted as mystic simply because they are without form and void. The operas of Wagner built, as they are, upon a superstructure of Norse tradition and folk-lore, and produced with a skill and attention to artistic detail which has never been equalled, present the best specimens of this kind of art; but the wisest of German musicians and critics, from Mendelssohn to Julius Schubert, shook their heads and declared that this was musical fanaticism, rather than true art; that, in attempting to deal with the psychological problems of life, music transcends her mission and exceeds her authority.

There can be no doubt about the propriety of employing music to express the emotions of the heart; and the melodies which so express them will always be music to the popular ear. But when interpretation by music invades the realms of speculation and intellectual apprehension, may we not say, as the sea said to Canute, "Thus far shalt thou go, but no farther?"

I have passed thus rapidly from the contemplation of tone in its incipiency, that is to say, from the wail of the child to the consideration of tone in its widest application—the dramatic, in order to show how important a part is played by these atmospheric pulsations, which we call sound. It is our principal medium of communication in this life, the means by which the emotions of every kind are best expressed all the way from the commonplace intercourse of life to the great apotheosis of religious fervor.

CHAPTER XVI.

RELAXING EXERCISES FOR THE VOCAL ORGANS.

EXERCISE I.

RELAX the muscles of the lower jaw, and allow it to drop heavily of its own weight. Repeat three times.

Exercise II.

Drop the lower jaw as in the preceding exercise. Rest the tip of the tongue lightly against the lower teeth, allowing it to lie perfectly relaxed on the floor of the mouth from tip to roots. Be sure that there is no activity in it, that it does not rise in the middle nor at the roots, but rests wholly inactive on the floor of the mouth. Hold this position from ten to twenty seconds.

Exercise III.

Rest the finger lightly upon the larynx, or that part of the throat commonly called Adam's apple. Drop the jaw; rest the tip of the tongue lightly against the roots of the upper teeth. Be sure that the tongue is relaxed at the roots, that it is not pressed against the soft-palate, that it is flexible from tip to roots, thereby allowing the larynx to rest in its normal position with

no tension of the muscles. This exercise may be performed with closed mouth. It will remove that fatigue or ache in the throat, common to intense people, who, during any silent occupation, unconsciously allow the muscles of the tongue and throat to sympathize with their intensity of thought or emotion until those muscles become tense, rigid and inflexible, thereby causing fatigue of the throat.

EXERCISE IV.

Drop the lower jaw; centre the mind on the soft-palate; I mean the movable curtain which separates the passage to the nasal cavity from that of the throat, to which is attached the uvula, commonly called the soft-palate. Relax this movable curtain, or soft-palate, allowing the uvula to rest upon the back of the tongue. Keep this position from ten to twenty seconds.

EXERCISE V.

With the mouth closed, the upper teeth resting lightly over the under teeth, part the lips and allow them to rest so, with no tension in the muscles of the jaw or mouth. Hold this position from ten to twenty seconds.

CHAPTER XVII.

ENERGIZING EXERCISES FOR THE VOCAL ORGANS.

LIPS.

EXERCISE I.

WITH the mouth closed, the upper teeth resting easily, without tension, over the under teeth, gently open and shut the lips without pressure or tension, flexibly parting and closing them. Repeat three times.

JAW.

Exercise I.

Flexibly drop the lower jaw until the opening between the teeth is sufficient to allow the tip of the middle finger to pass in and out freely between the teeth. Repeat three times.

EXERCISE II.

Gradually drop the jaw until the opening between the teeth may be measured by the first joint of the thumb inserted between the teeth, or even more if it can be done without undue strain. Repeat three times.

EXERCISE III.

Slightly dropping the lower jaw so as to unclasp the teeth, move it flexibly from side to side.

This exercise is especially recommended to those suffering from dryness of the membrane of the mouth or throat, as it increases the action of the salivary glands, thereby adding to the natural moisture of the throat and mouth.

TONGUE.

Exercise I.

Dropping the lower jaw slightly, project the tongue as far out of the mouth as possible; then withdraw it by the action of the muscles at the roots of the tongue as far as possible into the mouth, until it seems as though you were swallowing the tongue, at the same time keeping it flat on the floor of the mouth. Repeat three times.

EXERCISE II.

With closed lips, carry the tip of the tongue along the roof of the mouth to the soft-palate. Reverse the exercise and repeat it at discretion.

EXERCISE III.

With the lips closed, the lower jaw slightly relaxed so that the upper teeth do not fit over the under, alternately lift and lower the tip of the tongue, touching the wrinkles back of the teeth.

į:

EXERCISE IV.

With the tip of the tongue resting against the lower teeth, press the sides of the tongue against the upper teeth. Repeat at discretion.

EXERCISE V.

With the tip on the tongue resting against the lower teeth, press the back of the tongue against the soft-palate. Repeat at discretion.

Exercise VI.

Alternately raise and lower the tip and back of the tongue. Reverse the movement. Repeat at discretion.

During these exercises keep the lips closed, the jaw slightly relaxed.

SOFT-PALATE.

EXERCISE I.

Centre the mind on the soft-palate; with closed lips, alternately lift and lower it. Thinking a yawn, with the lips closed, will make this easy.

Exercise II.

Take a hand-mirror, open the mouth, depress the tongue, and raise the soft-palate until the uvula is almost out of sight. Relax, and repeat this exercise at will, until it becomes perfectly easy. It is most valuable for the correction of nasality, which is caused by the passage of the breath or the tone through the nose instead of into the mouth-cavity.

LARYNX.

Exercise L

Rest the tips of the fingers upon the throat, touching the larynx, or Adam's apple; voluntarily lower and raise it.

This exercise is facilitated by yawning, and dropping the lower jaw.

CHAPTER XVIII.

VOWEL TABLES.

THE correct pronunciation of every language depends upon a perfect enunciation of the vowels and consonants which comprise it. This perfect enunciation is the result of precision in the adjustment of the muscles used to form the mold through which the voice passes in vowel and consonant utterance. There is an exact mold or position for each vowel and consonant, and unless it can be assumed readily and easily, with accuracy, the language becomes imperfectly spoken and may be, in time, wholly lost.

The English language consists of a great variety of sounds to be uttered in quick succession, and requiring the utmost skill and nicety of muscular adjustment in their utterance.

To this end I have devised a set of exercises in the following Tables which, if faithfully practiced, will be to the voice what scales and five-finger exercises are o the fingers of a musician. They can be used by students of all ages and degrees of proficiency, ranging from the kindergarten to the pulpit or platform.

LONG VOWELS.

Ä	Ō	Ā	Ē	00	Ë
ō	Ā	${f ar{E}}$	00	Ä	É
Ā	${f ar{E}}$	00	Ä	Ō	Ë
Ē	00	Ä	ō	Ã	É
oo	$\ddot{\mathbf{A}}$	Ō	Ā	$ar{\mathbf{E}}^{+}$	Ë

a, as in ah; o, as in oh; a, as in mate; e, as in mete; oo, as in pool; e, as in her.

The sound of \ddot{e} , as in her, is what Bell calls the natural vowel; so called because of the lack of effort in its production. It may be given with the mouth closed or open. It is the sound uttered in pain, that little vowel moan, or plaint, which a sick child utters.

It is an important vowel; one that suffers much in general pronunciation. It should be heard in such words as *bird*, *girl*, etc. In short, it is the vowel-sound that usually precedes the consonant r as in *purr*, *fur*, *were*, etc.

Its faulty pronunciation comes from making it a diphthong, instead of a simple vowel; for instance, e-e, allowing the tongue to rise at the sides, giving two vowels before the consonant instead of one, calling bird bereed, instead of berd.

SHORT VOWELS.

Ă	Ĕ	Ĭ	ŏ	Ŭ
Ĕ	Ĭ	ŏ	Ŭ	Ă
ĭ	ŏ	Ŭ	Ă	Ĕ
ŏ	Ŭ	Ă	Ĕ	ĭ
Ŭ	$oldsymbol{\breve{A}}$	Ĕ	Ĭ	ŏ

a, as in hat; e, as in met; i, as in it; o, as in log; u, as in up.

WHISPERED ATTACK OF VOWELS.

EXERCISE I.

Inhale easily. Pause an instant; attack the natural vowel \ddot{e} in a gentle whispered click, allowing the breath to escape into the mouth immediately after its utterance.

Repeat three times. Renew the breath, and repeat.

EXERCISE II.

Pronounce in quick succession the vowels in the preceding Tables, in a whispered attack, a delicate click of the glottis. Stop short after each stroke. Allow no breath to escape into the mouth between the staccate enunciation of each vowel.

This exercise must be most carefully practiced, most lightly and delicately executed. It tones up the muscles, and gives precision to their adjustment. Relax the muscles after executing the exercise once, as a slight strain or tightening may be felt in the throat

from its performance at first. That is of no consequence; it results from unused muscles. It will disappear with practice. Avoid all tension.

BREATH PROLONGATION OF VOWELS.

Exercise L

Take the vowel e, as in her. Inhale easily, at the same time dropping the laryux and lifting the most-palate. When the lungs are filled, drop the jaw, being careful that the tongue rests flexibly on the flour of the mouth, the tip against the roots of the lower teeth, back tongue flat. Gradually and flexibly relax the diaphragm and abdominal muscles, directing the continuous stream of breath, or whispered e, forward to the wrinkles back of the upper teeth.

EXERCISE II.

Renew the breath easily through the none. Repent the preceding exercise, diffusing the whispered vowel over the roof of the mouth. Renew the breath, and direct the whispered vowel against the soft-palate. Renew the breath, and direct the whispered vowel from the pharynx straight into the head. Renew the breath, and combine the different directions or placings of the whispered vowel in a continuous gradual stream, first head, then soft-palate, then over the hard-palate, or roof of mouth, finally centering at the wrinkles back of upper teeth. Renew the breath, and reverse the order of placing, first, teeth, then hard-palate, then soft-palate, finally, head.

TONE-ATTACK OF VOWELS.

Exercise I.

Inhale easily. Pause an instant. Pronounce on one note in quick succession each vowel in the preceding Tables. Let the enunciation of each vowel be light and staccato. Pause an instant between each vowel. Avoid the escape of breath between vowels. Be careful to pronounce each vowel perfectly. Renew the breath at the end of each line, either across or up and down the Vowel Tables.

EXERCISE II.

Pronounce each vowel in the preceding Tables on an ascending scale. Begin with middle C, and go up an octave, giving a vowel for each note. Renew the breath, and come down the scale in the same way. Let the utterance be light and staccato.

EXERCISE III.

Practice the preceding exercise, and ascend on the chromatic scale. Renew the breath, and take the descending scale. Let the utterance be light and stactato.

EXERCISE IV.

Practice the vowels in the preceding Tables, and ascend the scale in legato movement. Renew the breath, and take the descending scale. Be careful to form each vowel perfectly; to give to each its delicate click or start of tone, without interrupting the flow of tone.

This is a difficult exercise, and requires a nice ear, and great precision and patience in practice. It gives the singing-quality to the voice, both in speech and in song.

EXERCISE V.

Practice the preceding exercise, ascending on the chromatic scale. Renew the breath, and descend on the chromatic scale. These exercises upon the scales impart to the speaking-voice a command of inflections, which is another term for scales. They also impart to both speaking and singing-voices the ability to pronounce all vowels equally well on any note.

PLACING OF TONE.-HUMMING.

EXERCISE L.

Practice the natural vowel \tilde{e} instead of using the conventional consonant m for this exercise. The practice of humming on m gives a nasal tone; whereas \tilde{e} avoids all such danger.

Close the mouth; lower the larynx; lift the palate and take the breath simultaneously. Give the whispered click of the vowel e three times, sending the breath into the head. Renew the breath, and substitute tone for breath, sending the tone through the vowel mold for ë straight into the head. At first you may part the lips very slightly; it is easier to do so; but keep the teeth closed, and hold the nose, that you may be sure there is no nasality. Do this until your ear is so trained as to detect the nasality instantly.

Practice this placing of tone on the ascending and descending scales, prolonging each note. Renew the breath on each note.

EXERCISE II.

Hum the scale on long e with legato movement. Send the tone into the mouth, diffusing the tone over the hard-palate.

An entire piece of music may be hummed in perfect time until it is mastered, and the tone all perfectly placed, before the interpretation of the piece is attempted. This gentle humming saves the voice, while the simple mastery of the tune and time is accomplished.

REMARKS ON THE PRECEDING CHAPTERS.

If the Breathing-Exercises have been faithfully practiced, there should be no need of conscious effort in the management of breath in voice-production. The breath should by this time respond to the spirit, and breathe itself in harmony with all phases or shades of thought or feeling.

CHAPTER XIX.

VOWEL TABLES.

LONG VOWELS.

Ä	Ō	Ā	Ē	Ī	Ë	Ū	00
00	Ū	${\bf \bar{E}}$	Ī	Ë	Ä	ō	Ā
$\mathbf{ar{U}}$	${\bf \bar{E}}$	Ĩ	Ë	Ä	ō	Ā	00
Ë	Ī	${\bf \bar{E}}$	Ā	ō	Ä	00	$\mathbf{\bar{U}}$
Ī	Ë	Ā	Ō	Ä	00	Ū	${\bf \bar{E}}$
$\ddot{\mathbf{E}}$	Ā	ō	Ä	00	$\mathbf{\bar{U}}$	Ē	Ī
${f ar{A}}$	ō	$\ddot{\mathbf{A}}$	00	$\mathbf{\bar{U}}$	Ë	Ī	${\bf \bar{E}}$
Ō	Ā	00	Ū	Ë	Ī	Ē.	Ä

a, as in arm; o, as in mole; a, as in mate; e as in mete; i, as in light; e, as her; u, as in tune; oo, as in moon. Long u has the sound of the pronoun you.

SHORT VOWELS.

Ā	Ě	1	Ŏ	Ŭ
Ā Ŭ	Ă	Ĭ	ŏ	Ă
ŏ	Ă Ă	Ĕ	Ĭ Ă	Ă Ŭ Ĕ Ŭ
Ĭ Ĕ	ŏ	Ĕ Ŭ Ĭ	Ă	Ĕ
$reve{\mathbf{E}}$	Ă	Ĭ	ŏ	Ŭ

a, as in at; e, as in met; i, as in it; o, as in lot; u, as in up.

EXERCISE I.

Practice the vowels in the preceding Tables. Pronounce, in the speaking-voice, light quality, those in the first line, giving the rising inflection to each vowel. Let the inflection rise three notes. Be careful to have the same quality of tone on the last of the inflection, or the last note, as upon the first. Keep the same placing for each vowel; that is, starting with sending the tone against the teeth, keep that placing throughout the line.

Take the falling inflection on each of the vowels in the second line, observing the same precautions as in the rising inflection. So on, through the Tables. Alternate rising and falling inflections.

This is a valuable exercise for correcting the tendency to let the voice drop, or, rather, vanish out of hearing at the end of a line or phrase, in reading or speaking. It is a common fault, a particularly vexatious and troublesome one to many public speakers, who often strive to obviate the difficulty by intoning on a monotone, feeling sure of the carrying power of the voice on one tone, or note. An inflection is simply a spoken musical scale, rising or falling. It may consist of only two notes, or it may extend over two octaves, according to the intensity of the speaker or of the subject. Every note in that inflection should be equally well placed. There is more trouble with the falling inflection, naturally, as the descending scale is harder to execute perfectly than the ascending, because of a natural tendency to relax the muscles on the downward movement. The muscles must be held firmly, but most lightly and flexibly, in place, until the tone has ceased.

But this fault of dropping at the end of a line is not due *alone* to relaxation of the breathing-muscles. It is due, primarily, to change of placing in the voice; in other words, suppose one starts with the vowel $a\ (ah)$ placed against the teeth upon a falling inflection, and allows the tone to slide backward until the closing note of the inflection is placed on the soft-palate. The result is a vanishing scale, or a diminuendo.

Take the line "Lord, thou hast been our dwelling-place in all generations!" The idea being complete upon the word "generations," we give it the falling inflection. In order to do so, we start the syllable gen on a note about three tones higher than the rest of the line, and descend the scale upon the three following syllables. The common failing lies in placing each successive vowel or syllable further back than its predecessor, until the last syllable is directed upon the soft-palate, or even on the pharynx, thus vanishing from the ears of an audience altogether.

The remedy is simple. Place the last syllable as far forward as the first, and pronounce it in the same quality of tone as the first syllable. There is a tendency to give the last notes of a falling inflection in heavier quality, especially if the character of the piece be serious or sombre. But whatever the quality at the start of an inflection, it should be preserved throughout that inflection.

I dwell upon the importance of this exercise, because

I have found such excellent results from its use. Persons who had used every device, from intoning to a short, sharp, barking utterance of their words, have, by this simple method of correct placing of the voice on each syllable, entirely overcome a difficulty of years in a few lessons.

I must not omit to mention here that it is perfectly possible for vocal or dramatic effect, to place the speaking-voice wherever the singing-voice may be placed; to execute all the inflections in that placing; to interpret an entire piece with the voice placed on the soft-palate in the head, on or over the hard-palate, or against the teeth.

I have given the preceding exercise for use in all colloquial or didactic speaking, lecturing, or reading, in large or small rooms. Being heard and understood depends upon a perfect pronunciation of vowels and consonants, a perfect management of the breath, as well as upon the placing of that breath in tone or upon the vowels.

EXERCISE II.

Practice the vowels of the preceding Tables. Pronounce those of the first line with a rising circumflex inflection; those of the second with a falling circumflex, and so on, alternating each inflection with each line, until the Table is finished.

EXERCISE III.

Pronounce the vowels of the first line on a rising scale or inflection, a vowel for each note. Descend

the scale on the second into a law some way and of on, alternating range and alternating articles are financed.

Lamenta I.

Some each near is the Latin two both men a rising inflormed or each ten time a falling. Over the falling each or inflortion are in the lating of the taring inflorion. It has upon that the tenth of the taring inflorion. It has upon the treath of tarin eightly between the mathematical falls eightly between the mathematical falls and the tare eightly between the mathematical falls and the same eightly between the same eightly between

Lastrian 1

Sound the vower in the Tables in a light poyone tone, varying the influences at will. For nonance give half of those in the first line a roung influence, half a falling influence. Thus the next line or a roung encumber, the next on a falling encountier and so on.

I find this exercise of great use; it gives fertiality to the voice.

Example VI

Sound the rower in a full, round quality of tone, varying the infloctions at will, as in the preceding exercise.

Exercise VII.

Pronounce the vowels in a whisper, then in a half-whisper or aspirated tone, varying the inflections at will. In the aspirated tone, allow the breath to escape with the tone.

EXERCISE VIII.

Sound the vowels in a soft, medium quality of tone, legato in movement, taking up each new tone or vowel with no pause or hiatus between vowels or tones, varying the inflections at will. This gives to the voice that quality which the French describe as trainante; i. e., a trailing, continuous, musical and tender utterance. Let it not be confused with drawling, which it in no way resembles. On the contrary, it requires the utmost precision in adjustment and control of muscles. It is the voice of the grande dame, the world over, and bespeaks either the refinement and culture of generations, or the training of an artist.

The languid, listless drawl, assumed in a vain effort to imitate what results from control of mind and muscles, is as far removed from it as are the relaxed, unused muscles and mind which bring about that inane drawl.

Both Vowel Tables may be used to interpret the meaning of voice in tone, independent of language or words. An entire conversation may be carried on in the utterance of mere vowel-sounds. Every phase of thought or feeling may be expressed through the medium of mere tone and breath, and with the management of inflection, quality of tone, time, phrasing, and the pause or rest.

The unpleasant din of an assemblage, social or other, is due to the quality of noise, not to its volume, nor even to its pitch. A high-pitched voice in speaking is not necessarily a disagreeable one; that depends upon

its quality. We do not condemn a singer because he or she finds soprano or tenor the natural medium for expression in tone, instead of contralto or basso. "Her voice was ever soft, gentle and low," does not necessarily mean that she spoke in tones low-pitched, musically speaking. It probably means that she possessed that refinement and softness of tone which were the result of heredity and the influence of the Court.

The best pitch for ordinary conversation is, no doubt, that of the medium or middle notes of the voice; but it must be remembered that each person has his own natural pitch or range of voice, in speaking as well as in singing; and, while every voice may be cultivated, that cultivation must be limited to the range and quality of each individual voice. The attempt to make a contralto speaker of a high, light soprano, or an orotund basso of a light tenor, would fail as surely in the speaking as in the singing-voice.

Pitch is often confused with quality. A thin quality given on a low pitch sounds an octave higher than the same pitch if given in a full, round quality of voice. All thinness and harshness of voice may be removed by practice. It requires a nice musical ear to accomplish this. The speaking-voice requires for its perfection as exact and careful training as does the singing-voice. The difference consists mainly in the continuity required for the singing-voice, and in the fact that in song we pronounce only simple vowels, not diphthongs, that we give only the first vowel of a diphthong. For instance, the English long a, o, i, etc., are made up of two sounds, a - e = a, $o - oo = \bar{o}$, $d - \bar{e} = \bar{e}$. In song we sound

only the first of these vowels. In speech we dwell on the first and sound the last very quickly and delicately. The speaking-voice is more broken up. But all the elements of training in song are there,—quality, pitch, time, inflections or scales, volume, etc.

As I have said, it is not the amount of noise, but the quality, which deafens us, and destroys all capacity to think, much less to utter what one thinks in a crowded room full of talking people.

If the quality of the voices is soft, not shrill, there will result simply a confused murmur of tone, instead of the harsh, resonant shricking, too often heard in our large assemblies.

I often divide a large class, of perhaps from 50 to 100, into conversing groups, as it were, some giving the vowel-sounds on a high, some on a medium, some on a low pitch, with varied inflections and qualities of tone, and start them at the same time, gradually increasing the volume of voice. The result is certainly that of considerable noise, but it is a pleasant noise.

I subjoin the following exercise to be practiced both upon the Vowel Tables and the Tables of Consonants and Vowels Combined.

EXERCISE IX.

Allow two or more members of the class to whisper a line or more of the Table chosen; two or more to sound the vowels in half-whisper or aspirated tones; two or more on a monotone; two or more on falling inflections; two or more on rising inflections; two or more on alternate rising and falling inflections; two or more on rising circumflex inflections; two or more on falling circumflex inflections.

Be sure that there is no unpleasant quality of voice. Increase and diminish the volume of voice at will.



CHAPTER XX.

CONSONANT TABLES.

SILENT CONSONANTS.

\mathbf{P}	${f F}$	${f T}$	K
\mathbf{F}	${f T}$	K	\mathbf{P}
${f T}$	K	${f P}$	\mathbf{F}
K	P	${f F}$	${f T}$

The consonants of this Table are silent; that is, they are mere positions of the organs of speech, and depend upon the vowel following them for any sound.

It is of the utmost importance that they should be practiced by themselves, in order that an accurate placing of the organs of speech, for their production, may become a habit.

For consonant p, press the lips lightly and flexibly together, being careful not to wrinkle or strain them.

For consonant f, gently rest the upper teeth on the under lip, near the outer edge of the lip, as if biting it.

For consonant t, drop the jaw slightly, part the lips, and press the tip of the tongue against the roots of the supper teeth.

For consonant k, drop the jaw, part the lips, keep the tip of the tongue at the roots of the lower teeth. Press the back of the tongue against the soft-palate.

EXERCISE I.

Assume each of these positions in quick succession, in the order of the Table.

Let it be done silently, and with the utmost precision.

Vary the order of the Table at will in repeating the exercise.

VOCAL CONSONANTS.

В	\mathbf{v}	D	G
${f R}$	${f L}$	\mathbf{M}	N
\mathbf{s}	${f z}$	\mathbf{v}	D
G.	${f R}$	${f L}$	M
N	${f z}$	V	D

The consonants b, v, d, g, have the same positions of the organs of speech given to p, f, t, k. Their difference consists in the fact that, while each position is held, a sound is made in the larynx, which has given them the name Laryngeals.

R is made by a rapid vibration of the tip of the tongue, which is placed at the wrinkles back of the teeth; the stream of breath or tone passing rapidly over it, causes a quick vibration.

L is formed by resting the tip of the tongue flexibly against the wrinkles back of the upper teeth, and directing a continuous tone or sound to that point.

M is a nasal consonant. It is formed by closing the lips, keeping the tongue flat, and sending tone through the nose.

N, also a nasal consonant, is formed with the tip of the tongue against the wrinkles back of the upper teeth, while vocalizing.

S is formed by a slight pressure of the sides of the tongue against the upper teeth, while the breath is hissed over the tip of the tongue. It is the most disagreeable sound in the language, and should be dwelt upon as lightly as possible.

When a succession of hissing s's come together, sound only one.

The beauty of all language in tone is euphony.

Z is a double consonant whose first position is that of d, second, that of s. The voice, or sound, in the larynx continues through the two positions. It is a vocal hiss; whereas s is a breath hiss.

EXERCISE II.

Sound in quick succession the consonants given in the preceding Tables.

Vary the order of the Tables in repeating the exercise.

CHAPTER XXI.

COMBINATION OF LONG VOWELS WITH CONSONANTS.

	TABLE I.					
Pä	Pō	Pā	${f Par{e}}$	Poo	Pë	
Fä	${f F}ar{{f o}}$	Fā	Fē	\mathbf{Foo}	Fë	
Tä	${f T}ar{f o}$	$T\bar{a}$	${f T}ar{f e}$	Too	Të	
Kä	Kō	Kā	Κē	Koo	Kë .	
TABLE II.						
Bä	Вō	Bā	$\mathbf{B}\mathbf{\bar{e}}$	Boo	Bë	
Vä	Vō	$V\bar{\mathbf{a}}$	V ē	$\mathbf{v}_{\mathbf{oo}}$	Vë	
Dä	\mathbf{D} ō	$\mathbf{D}\mathbf{\tilde{a}}$	$\mathbf{D}\mathbf{\tilde{e}}$	\mathbf{Doo}	Dë	
Gä	Gō	Gā	Gē	. Goo	Gë	
TABLE III.						
Rä	$\mathbf{R}ar{\mathbf{o}}$	Rā	i	$\mathbf{R}\mathbf{ar{e}}$	\mathbf{Roo}	
Sä	Sō	Sā	i	Sē	Soo	
Mä	Μō	M	Ā.	$\mathbf{M}\mathbf{ar{e}}$	Moo	
Nä	Nō	Na	ā	$N\bar{e}$	Noo	
Тä	Τō	T.i	ā.	Tē	Loo	

TABLE IV.

Pra	Prō	Prā	$\mathbf{Pr}\mathbf{\bar{e}}$	Proo	Prë
Frä	Frõ	Frā	$\mathbf{Fr}\mathbf{\bar{e}}$	Froo	Frë
Trä	Trō	Trā	${f Tr} {f ilde e}$	Troo	Trë
Krä	Krō	Krā	Krē	Kroo	Krë
- TABLE V.					
Brä	Brō	Brā	Brē	Broo	Brë
∇ rä	\mathbf{Vr} ō	$\mathbf{Vr}\mathbf{\bar{a}}$	$\mathbf{Vr}\mathbf{\bar{e}}$	Vroo	$\mathbf{Vr}\ddot{\mathbf{e}}$
Drä	$\mathbf{Dr}ar{\mathrm{o}}$	Drā	Drē	Droo	Drë
Grä	Grō	Grā	Grē	Groo	Grë
TABLE VI.					
-	Pū	$\mathbf{F}ar{\mathbf{u}}$	${f T}ar{f u}$	Kū	
	${f B}ar{{f u}}$	V ū	$\mathbf{D} \bar{\mathbf{u}}$	Gū	
	$\mathbf{M} \bar{\mathbf{u}}$	$N\bar{\mathrm{u}}$	$\mathbf{L}ar{\mathbf{u}}$	Sū	
Py	ou	Fyou	Tyon	u K	you, etc

The sound of long u is the same as that of the pronoun you. It needs exact blending with the consonant preceding it, and is one of the hardest combinations. Long u after r is the same as oo. Do not make the mistake of attempting to give it the sound of the pronoun you, as with the other consonants.

TABLE	VII.
TADLE	7 44.

${f P}$ ôr	Pâr	${f P}{f \hat{e}}{f r}$	Pôôr
\mathbf{F} ôr	$\mathbf{F}\hat{\mathbf{a}}\mathbf{r}$	Fêr	\mathbf{F} ôôr
$\mathbf{T\hat{o}r}$	Târ	${f T}{f \hat{e}}{f r}$	${f T}$ ôor
Kôr	Kâr	\mathbf{K} êr	Kôôr
Bôr	$\mathbf{B}\mathbf{\hat{a}r}$	${f B\hat{e}r}$	${f B}\hat{f o}\hat{f o}{f r}$
Vôr	$\mathbf{V}\mathbf{\hat{a}r}$	Vêr	\mathbf{V} ôôr
$\mathbf{D\hat{o}r}$	Dâr	${f D\hat{e}r}$	Dôôr
$\mathbf{G\hat{o}r}$	Gâr	${f G}$ êr	Gôôr

TABLE VIII.

$\mathbf{M}\hat{\mathbf{o}}\mathbf{r}$	Mâr	${f M}$ êr	Mûr
Nôr	Nâr	\mathbf{N} ê \mathbf{r}	Nûr
Sôr	Sâr	Sêr	Sûr
\mathbf{L} ôr	${f L}{f \hat{a}}{f r}$	${f L}{\hat{f e}}{f r}$	Lûr
Pûr	$\mathbf{F}\hat{\mathbf{u}}\mathbf{r}$	$\mathbf{T}\hat{\mathbf{u}}\mathbf{r}$	Kûr
${f B}$ ûr	$\mathbf{V}\mathbf{\hat{u}r}$	Dûr	Gûr

Tables VII. and VIII. are given for the practice of gliding the vowel into the consonant r. The vowel really becomes a diphthong, and glides into the natural sound or vowel \ddot{e} before the consonant r is sounded. For instance, in the word glory, the pronunciation should be gloëry, only the first part of long o should be given, then it should glide into the natural vowel \ddot{e} .

The gliding or blending of a vowel with the consonant r following it, renders the English language soft, musical, and flowing. It marks the difference between

the English language as spoken by any Briton, be he English, Scotch, or Irish, and that same language as spoken by the majority of native Americans. Indeed, the consonant r has much to do with the refinement of the language in speech. If initial r is pronounced with the lips, instead of with the tip of the tongue, at once the language becomes harsh and common.

If final r is trilled, or rolled, it makes the language harsh. It should be merely touched with the tip of the tongue; not omitted, and not trilled.

CHAPTER XXII.

		TABLE I.		
Pá	Pĕ	Pι	Pŏ	Pŭ
Fă	$\mathbf{F}reve{\mathbf{e}}$	Fĭ	Fŏ	Fŭ
Tă	Tĕ	Tí	$\mathbf{T}reve{\mathbf{o}}$	Tŭ
Kě	K ĕ	Kı	K ŏ •	Kŭ
		TABLE II		
Bă	${f B}reve{{f e}}$	Bı	Bŏ	Вŭ
\mathbf{V} ă	$\mathbf{V}\mathbf{\check{e}}$	Ví	Vŏ	Vŭ
$\mathbf{D}\check{\mathbf{a}}$	$\mathbf{D} reve{\mathbf{e}}$	Dí	Dŏ	$\mathbf{D}\mathbf{\check{u}}$
Gă	Gĕ	Gí	Gŏ	Gŭ
		Table III	•	
Ră	$\mathbf{R}reve{\mathbf{e}}$	${f R}$ r	${f R}$ ŏ	\mathbf{R} ŭ
Să	Sĕ	Sĭ	Sŏ	Sŭ
$\mathbf{M}\mathbf{\check{a}}$	Μĕ	Mí	Mŏ	Мŭ
Nă	Nĕ	Ní	Nŏ	Nŭ
T.ă.	Lĕ	Lī	Lŏ	Lŭ

TABLE IV.

Pră	$\mathbf{Pr}reve{\mathbf{e}}$	Prí	Prŏ	Prŭ
Fră	$\mathbf{Fr}\check{\mathbf{e}}$	\mathbf{Fr}	${f Frreve{o}}$	Frŭ
Tră	Tıĕ	\mathbf{Tr} í	${f Tr}r{f o}$	Trŭ
Kră	Krĕ	Krı	$\mathbf{Kr}reve{\mathbf{o}}$	Krŭ
		•		
		TABLE V	•	
TD ~	TD ~	TD. ×	TD .~	т~

Brā	Brē	Bri	\mathbf{Bro}	Brů
∇ ră	$\mathbf{Vr}\mathbf{\breve{e}}$	\mathbf{V} rĭ	$\mathbf{Vr\check{o}}$	$\mathbf{Vr}\mathbf{\check{u}}$
Dră	$\mathbf{Dr\breve{e}}$	\mathbf{Dr}	$\mathbf{Dr\breve{o}}$	\mathbf{D} rŭ
Gră	Grĕ	Grí	Grŏ	Grŭ

TABLE VI.

Păr	${f Preve{e}r}$	\mathbf{P} í \mathbf{r}	${f Preve{o}r}$	Pŭr
Făr	\mathbf{F} ĕr	$oldsymbol{\cdot}\mathbf{Fir}$	$\mathbf{F} \check{\mathbf{o}} \mathbf{r}$	Fŭr
Tăr	$\mathbf{T}\check{\mathbf{e}}\mathbf{r}$	Τĭr	$\mathbf{T\check{o}r}$	Tŭr
Kár	${f K}reve{{f e}}{f r}$	Kĭr	\mathbf{T} ŏr	Kŭr

TABLE VII.

Băr'	${f B}reve{{f e}}{f r}$	${f B}$ ír	${f B}reve{f o}{f r}$	${f B}$ ŭr
\mathbf{V} ăr	$\mathbf{V}reve{\mathbf{e}}\mathbf{r}$	\mathbf{V} ír	\mathbf{V} ŏr	Vŭr
$\mathbf{D}\mathbf{\check{a}r}$	${f D}reve{{f e}{f r}}$	\mathbf{D} ír	\mathbf{D} ŏr	Dŭr
Găr	Gĕr	Gĭr	Gŏr	Gŭr

TABLE VIII.

Răr	${f R}$ ĕ ${f r}$	\mathbf{Rir}	\mathbf{R} ŏr	${f R}$ ŭr
Lăr , '	\mathbf{L} er	${f L}$ ír	${f L}reve{or}$	${f L}reve{{f u}}{f r}$
Măr	$\mathbf{M}reve{\mathbf{e}}\mathbf{r}$	\mathbf{Mir}	Mŏr	Mŭr
Năr	Nĕr	\mathbf{N} ĭr	Nŏr	Nŭr
Săr	Sĕr	Sír	Sŏr	Sŭr

TABLE IX.

Ability	${f Impossibility}$	
Impressibility	${f Eternity}$	
Trinity	Charity	
Vĕry	M ĕr ry	
Hŭrry	Cŭrry	
Tŭmble	$\mathbf{C}\mathbf{\check{u}}\mathbf{p}$	
Lătin	Sătin	
Hälf	Läugh	

Pronounce the vowels in this Table with great precision.

CHAPTER XXIII.

EXERCISES FOR COMBINATIONS OF VOWELS AND CONSONANTS, AS GIVEN IN THE TABLES.

EXERCISE I.

PRACTICE the preceding Tables (Chapters XXI. and XXII.) in staccato whisper. Pause slightly between each utterance. Pronounce each combination with the utmost accuracy and precision.

Practice the Tables in legato, prolonged whisper. Make no pause between each combination. Renew the breath before each line; oftener, if necessary.

Exercise II.

Practice the Tables in quick, light, staccato utterance, on one note of a scale. Pause between each combination. Then practice the same in legato utterance; no pause between combinations.

EXERCISE III.

Practice the same Tables with rising inflections; that is, give the rising inflection to each combination of vowel and consonant, also to each vowel of the Vowel Tables.

Be careful to keep the voice well placed throughout the inflection to the end.

EXERCISE IV.

Practice falling inflections on all the preceding Tables. Be accurate in the start of the inflection; keep the voice placed to the end. Take the breath easily, and control it flexibly. Renew it when necessary.

EXERCISE V.

Give alternate rising and falling inflections on the preceding Tables.

EXAMPLES. á à ố ồ Pá Pổ Pấ Pế Pốō EXERCISE VI.

Practice rising circumflex inflections on the Tables.

Practice falling circumflex inflections on the Tables.

EXERCISE VII.

Practice the Tables with both rising and falling circumflex inflections, given alternately.

EXERCISE VIII.

VOWEL AND CONSONANT COMBINATIONS.

Practice the ascending scale on these Tables with light, staccato utterance.

Practice the descending scale in the same way.

EXERCISE IX.

Practice alternate ascending and descending scales, on Tables of Consonants and Vowels Combined, with legato movement.

These scales may be practiced in light or sombre quality, but be careful to keep the quality the same throughout any given scale. Do not start in light quality, vary in the middle, and end with sombre, heavy tones. Although it is most necessary to be able to vary quality at will, it is absolutely necessary to be able to keep the voice uniform in quality and placing throughout a scale, a phrase, and, it may be, even throughout an entire selection. Therefore, that command of the voice must be established.

CHAPTER XXIV.

CRESCENDO PRACTICE AND PLACING OF TONE.

PRACTICE sustaining and swelling different notes of the scale, low, medium, and high, on all the vowels, as well as the Vowel and Consonant Combinations, of the preceding Tables.

EXERCISE I.

Place the vowel on the wrinkles back of the upper teeth. Start the tone (either of light or sombre quality) softly; gradually allow it to increase in power until it reaches the limit, then gradually diminish. Keep the same placing throughout.

Do not force the tone; let it grow. Take the breath easily and gently. Relax the muscles most gradually and imperceptibly on the outgoing breath, or tone. By this I do not mean that they should become flabby; but do not hold them out in a tense and strained fashion; keep them flexible. The tone will be correspondingly liquid, flexible, and sympathetic. Tense holding of the breathing-muscles causes that hard, steam-whistle voice so common among us.

EXERCISE II.

Practice the preceding exercise, sending the voice along the hard-palate.

Exercise III.

Practice the same, sending the voice into the head.

EXERCISE IV.

Practice the same, starting with head-placing, passing into hard-palate or roof of mouth placing, and, finally, centre at the teeth. Diminish inversely.

CHAPTER XXV.

A PLEA FOR THE USE OF STRINGED INSTRUMENTS IN VOICE-DEVELOPMENT.

F late years the senses have been utilized, for scientific purposes, to a much wider extent than formerly, so that instruments innumerable have been invented to aid the eye, the ear, the sense of touch; and there is even a mechanism which feels the pulse, and records results.

The clinical teachers of Vienna, as also those of Paris and Berlin, lay great stress on the cultivation of the ear for the purpose of detecting that discord which mars the harmony of perfect health; and even the great Helmholtz, inventor of the opthalmoscope, has declared that it is of the highest importance for students who propose to excel in such departments of diagnosis as require a cultivated sense of hearing, to study carefully some stringed instrument. It is not alone the musical ear, the capacity for differentiation of sounds, that is here required, but it is in the keen perception of quality of tone that the study of stringed instruments is an education. The piano may be out of tune, the student does not tune it; and many excellent players upon that instrument have been notably deficient in what is called "ear;" whereas, the playing upon the

violin, guitar, harp, or any stringed instrument, necessitates frequent tuning, which can only be accomplished by the judicious use of the sense of hearing. Hence, it is obvious enough that, if to cultivate a sweet voice it is necessary the ear should perceive errors in tone, assuredly that method of practice must be most useful which imparts correctness and judgment to the ear.

Each instrument has its allotted function; say, for ballad singing, or for serenades, seek the accompaniment of the guitar, which presents a light background full of romantic suggestion; the harp is the recognized companion of more ambitious efforts; the violin takes the place among stringed instruments, which would be accorded to the human voice in its upper register.

The viola and violoncello, more often used to sustain the violin, furnish either a graver background of accompaniment, or can be used for purposes of pure melody; in which case, they represent voices of the lower registers.

The tuning of all these instruments requires exquisite nicety of ear; indeed, even a refinement of perception as to sound, which is not only unnecessary on the piano, but quite out of the question.

The Greeks seem to have formed their ears to this delicate gradation of sound; and, whatever difficulties or objections may lie in the way of its practical use, we must agree with Mersenne (*Preludes de l' Harmonie*) that the theory of music would be imperfect without it; and, even in practice, as Tosi, among others, very justly remarks ("Observations on the Florid Song"),

"There is no good performer on the violin who does not make a sensible difference between D sharp and E flat, though, from the imperfection of the instrument, they are the same notes upon the piano-forte."

I am aware that in urging a substitution of stringed instruments for the ever-ready and omnipresent piano, I am sinning against the ethics of indolence and the tendency to make shift with poor alternatives, which so often characterizes the study of a difficult art. But it is not in "six easy lessons" that this subject can be mastered; and it is just as well to know beforehand that it will require every effort, and the use of many appliances, to attain such proficiency as is here indicated.

Many musicians, some among the most eminent, maintain that the violoncello contains within itself the promise and the potency of noble sounds to a greater degree than any other instrument. This is especially true when you come to consider quality of tone; lacking the tenuity of the violin, it is more en rapport with the deeper and stronger emotions which it is desirable to express by the human voice; while its perfection, as an instrument of sound, is indisputable. Almost any one can purchase a tuning-fork whereby the pitch can be established, and if the services of a violoncello or of a violin be procurable, it would not take long to master so much of the instrument as would be needed to train the ear, and, consequently, the voice. failing this, a guitar can be purchased for a very small sum, and, when properly tuned, would answer every purpose in the adjustment of voice.

CHAPTER XXVI.

DAILY REGIME FOR AN ARTIST.

GPON waking after a sleep of from seven to ten hours—the number of hours to be regulated by your own needs, according to your health and temperament, the test being inability to sleep longer—take a small cup of black coffee, made by percolation, in French fashion. While taking this, have the room well and quickly aired. Close the windows, and, lying upon the back, throw the arms over the head and stretch the entire body to its utmost length three times, relaxing after each stretching. Turn upon the side, roll to the edge of the bed; slip the leg of the side upon which you are lying off the bed, this followed at once by the other leg, allowing both legs to hang flexibly from the knee. Simultaneously with this movement, lift the body until it rests upon the elbow. Rise to a sitting position, allowing the feet to touch the floor. Take your weight upon the foot farthest back, and rise to a standing position. Transfer the weight to the advanced foot or leg, and step into the centre of the room, or wherever you will be free to move with Stand, heels together, carry the arms over the head, lifting them at the sides, palms up, until they meet over the head. Stretch the arms to their utmost.

perfectly straight, palms touching. Part the hands, carry the arms down, until the wrists are on a level with the shoulders, palms up, straining every muscle to its utmost tension, part the fingers and stretch them, thus sending the nervous life-current to the finger-tips. Hold this position a few seconds, then relax the fingers and close them upon the palms, forming a fist; then drop the elbows to the sides as in the Delsarte Serpentine Movement, and with closed hands carry the arms downward to the sides, as in the Serpentine Movement, one arm slightly in advance of the other. Hold this attitude a second, then alternately stretch and relax the fingers, keeping up the utmost tension of the arm-muscles.

Repeat this stretching exercise three times, then relax the muscles easily.

Spread a rug, preferentially of fur, upon the floor. Stretch yourself upon it, lying on your back. Let the arms rest easily at the sides. Inhale deeply and tranquilly three times, calling into play all the muscles used in breathing. While lying on the back, execute the Facial Exercises once; Arm Exercises once; Leg Exercises once; Rolling Exercise once. Rise to a kneeling position; thence to a standing position.

Take a quick bath in warm water, followed by a shower of cold water; the degree of cold must be regulated according to your own ability to bear the shock with benefit, and to react. The test must be a reaction in the form of a warm glow and a sense of freshness. Dry yourself quickly. With a powder puff dust the body with rice powder. Dress quickly

in a loose gown with no corset. Then, in an adjoining room, which has been well aired, take a cup of coffee or tea, with a roll or bread and butter; after which, without seeing or conversing with any one, devote yourself for two or three hours to your art-work, whatever it may be, sternly refusing all interruption. You will thus have all the freshness of the morning to put into your work.

Remember, in training the voice, for speaking or singing, that the practice of actual tone-production must be regulated with great care, and either singing or reading aloud—in the way of practice—should not be continued over fifteen minutes consecutively. It is easy to alternate vocal practice with muscular exercises and breathing-exercises, also to vary the practice by instrumental music.

A most valuable practice is that of interpreting the piece silently; that is, study the meaning, take into the mind the beginning, middle and ending of a composition, its purpose, progression, and completion as a whole, and its various shades of meaning. Consider the character of the composition; what is its prevailing color bright or sombre—the various shades of these; and the preservation of its tone or color from beginning to Having mastered the meaning, silently feel it. Assume the emotions which are to be depicted in tone and manner. Throw yourself into the mood of the Use your imagination; without that power it is impossible to become an artist in any field. tone in speech or song may be pure, round, resonant, and full, and yet lack heart, soul, and that sympathy which comes of warm, vivid feeling. This power may be cultivated by practice. Those beings who naturally throw themselves into a mood or state of feeling are rare, and may be called geniuses in the world of expression. Even they need constant practice to be sure of executing what they imagine or feel.

To be a master in any art one must have control of the mind and emotions, for creation; of the body, for interpretation. The singer, actor, or musician may imagine and feel, but without the medium of a trained ear and voice aided by a flexible body, he cannot reveal to others the creations of his mind. A painter, sculptor, poet, or author is equally at the mercy of the body, when it comes to interpretation. Health is not The hand, the eye, the ear, must all be enough. trained to execute the thought, the soul of the artist. All arts are allied. That being who has no ear for sound, no sense of rhythm in movement, is not a poet of the highest order, though he may add rhyme to rhyme, and build solid blocks of words into what is denominated by that evasive title, blank verse. Poetry has to do with form, sound, and rhythm. These may be absent from much that is called poetry, while, on the other hand, they may be present in some prose, as in the perfect phrasing and music of Ruskin.

It would be well to occupy one of the three hours of solitude in reading silently and thoughtfully. At the end of this time stretch yourself upon the floor or upon a couch. Relax the whole body easily and perfectly, removing all tension from every muscle. Inhale deeply and tranquilly several times. Rest for fifteen

minutes or more, breathing as in sleep. Rise, open the windows, stretch yourself as in yawning, carrying the arms over the head and back again to the sides. Take the Breathing-Exercises. Give yourself a little shake, dismiss all thought of your work, and enjoy a simple déjeûner or lunch, after which, dress, and go out of doors, rain or shine, taking care that the feet are well protected. Walk at least a mile—twenty blocks; occupy yourself as you must, or as you choose, until five o'clock; then return home, remove street costume, and corset. Putting on a loose gown, lie down and rest for half an hour alone, then dress for dinner at six; after which, spend an hour in pleasant chat and the rest of the evening in as pleasant a manner as possible, retiring at ten o'clock to your room. tepid bath quickly, anoint the body with almond oil and alcohol mixed, well rubbed in. Take the Facial Exercises, after which rub the face and neck thoroughly with cold cream. Wipe it off with a soft cloth. The best preparation that I know of for this purpose is de Medici's Oxzyn Balm.

Stretch yourself upon your bed, lying on your back, relaxing every muscle. Close the eyes. Inhale deeply and tranquilly, using all the Breathing-Muscles, after which, inhale gently with no thought of the muscles and without effort, pausing after each exhalation as in sleep. You will soon feel drowsy. Rotate easily to your right side. Breathe gently, without effort, the breathing of a healthy baby. Think of nothing, allow yourself to be swayed and breathed upon by the spirits of dreamland.

"But now by this my love has closed her sight, And given false Death her hand, and stol'n away To dreamful wastes where footless fancies dwell Amid the fragments of the golden day."

There are rare beings who easily dismiss care, thought or anxiety, who change their mood at will, and who are, therefore, not obliged to take conscious precautions in order to procure sleep, even after the most active use of the mind. But it is more often the case that when the mind and imagination have been actively in use, the pictures and scenes impressed upon them become so vivid as to infuse a nervous vitality and activity throughout the whole body, causing wake-For such persons the exercises just given are invaluable; and, while they may not be effective at once with active, highly nervous or vividly imaginative persons, they most certainly will become so by faithful consecutive practice, thereby rendering the habit of sleep as strong as that of wakefulness had formerly been; we are so much the victims of habit.

Many a grand artist has been dawdled away and lost to the world because of the habit of desultory work, work without system—in short, idleness—worse than indolence, because confessed laziness brings with it a certain *dolce far niente*, whereas idleness brings with it irritability and dissatisfaction, a sense of incompleteness and a general discontent of body and mind.

Although I know persons who can write, study, and think with people talking all about them, still

it seems to me that for consistent, consecutive effort an artist should be able to give his freshest hours to his work, and if he is thrown in with congenial friends in the morning at breakfast, the chances are that he will give out the best of himself, all the sparkle and vitality of his mind, in talk—charming for his friends, fatal to his work; for that precious nervous force gained by rest and sleep is only so much, and no more; and, if spent in entertaining friends, it is not at hand for work, and, being gone, what would have been a joy becomes mere soulless drudgery, leaving the artist irritable, discontented and discouraged.

Self-indulgence is the foe of every artist, and the battle is constant, for with the artistic temperament goes the keen, child-like enjoyment of life. It takes character and resolution to set aside those first, fresh hours for work, before seeing any one, coming, as it were, new-born to a world of thought and art-work. Believe me, fellow-artist in this beautiful, distracting world, the results from such a rigid system of self-discipline and renunciation, would seem little short of marvelous.

I am well aware that, on first thought, this course may appear selfish and impossible; but pause, reflect, before you cast it aside as impossible. Consider the number of hours in a day. Is it too much to set aside four of your fifteen waking hours for thoughtful, uninterrupted work in your chosen art or profession? Surely, the remaining eleven ought to suffice for the duties and pleasures of a day.

I have advocated the use of the morning hours, because the soul comes fresh from realms untouched by care, worry, or the struggle of life. An artist is a sensitive being; for his best endeavor the conditions must be favorable. These conditions are so simple that they are within the reach of all.

To you, my dear breadwinner for those happy babies, old and young, all equally unrealizing of your desperate struggle for that bread, preëminently belongs the right to that seclusion, that privacy, which shall give you the power to put forth your best efforts. The thoughtless love which exacts your constant presence must be gently led into a thoughtful love, which shall recognize your needs and rights, and willingly accord you four hours out of fifteen which shall be wholly free from the discussion of ways and means, wholly unmixed with the cares of the real world, for it is out of the products of your ideal world that their real world must be evolved.

CHAPTER XXVII.

BIRD-SONGS AND THEIR MUSICAL SCORES.

IT is a question in my mind whether there is not something almost sacrilegious in daring to imitate the songs of birds, they seem so nearly divine. the instinct to do so is irresistible to one who loves them, so delightful is the strange, sweet sense it gives of becoming suddenly a "wandering voice," "a spirit of the air." My only plea for such daring must be the spell which their ways have cast over me from early childhood. Others have felt that charm, have listened with rapture to their music, and have recorded it in more imperishable form than that of sound-waves upon the air. I have been fortunate in securing the permission of Messrs. Lee & Shepard to print some of the musical scores of bird-songs thus obtained by Simeon Pease Cheney, and embodied in that rare book of his, "Wood Notes Wild," which contains a charming account of birds and their ways, with the songs of all our favorites.

It is also my good fortune to obtain the permission of Edith M. Thomas to print her poem entitled, "Morning in Birdland," part of which was written especially for me, and all of which she has adapted to my purpose of introducing the songs of various wild

birds. Some of the music was written by Wilson Flagg for a series of his own articles, published in 1858 and 1859.

With regard to the method of executing these birdnotes, I can only say that it is impossible to give adequate directions without illustration by the voice. Only this I can say, that, of musical instruments, the violin and flute come nearest to the sounds produced by birds. The piano is worse than useless in reproducing them, it is, in fact, misleading.

One simple direction I can give, which is, listen to the birds, try to imitate them, for it is to the ear that we must trust for accuracy in reproducing these delightful sounds, the practice of which, in my judgment, forms a most important and useful element in the study of tone-production.

[In choosing the bird-songs for the medley at the close of the first stanza, I have repeated the robin because, as is well known, he is our principal singer in the morning chorus.]



MORNING IN BIRDLAND.

By Edith M. Thomas.

At one in the morning all's silent in Birdland,
All light wings are folded, and curtained all eyes,
At two in the morning some dreaming young thing
A snatch from its daytime roundelay tries;
At three in the morning Early-Bird chides his
Slow neighbors—and then falls asleep unaware!
At four in the morning all, merry and mad, pour
A medley of song on the quivering air.





Good morrow, O sweet Morning!
Kiss me with sun and wind,
And without word of warning
Drive winter from the mind.
Then let the heart be taken
With many a happy sigh—
To hear the songs awaken
From out the bluebird sky;

[Bluebird.]

The robin's silver fluting Upon the maple tops;

[Robin.]

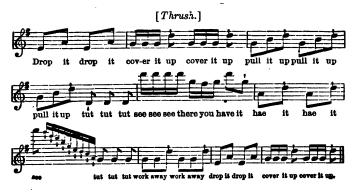


The sparrow's gay disputing In every hedge and copse;

[Song Sparrow.]



The thrush's mellow whistle
From woodlands cool and moist;



The finch upon the thistle

[Grass Finch.]



The wood-dove echo-voiced;



The pewee softly calling;



The warblers' hidden choir Where apple flowers are falling And darts the oriole's fire.





The swallow builds her dwelling Of clay from sunny pools, The doves their loves are telling— The scolding wren o'er-rules.

[Wren.]





Up starts the golden flicker
And hurls his notes about,
The bluejays tilt and bicker—
The cuckoo's a sly scout!
But hark! from last year's stubble,
How cheerily pipes the quail!



While bobolink notes up-bubble

[Bobolink.]



From every grassy swale.

The blackbird, free from trouble,

[Blackbird.]

Pours out a gossip tale, And laughs the crow at pillage In fields of planted corn— All drunk with spring's distillage, All mad with joy this morn!



Good morrow, O sweet Pleasures!
Good cheer unto my songs,
That come in thronging measures
As spring birds come in throngs.

I am so often asked for the notes of the canary that I subjoin the following songs from Gardiner's "Music of Nature:"



CHAPTER XXVIII.

LECTURES BY DR. SAMUEL R. ELLIOTT.

[The following remarks on "Gymnastics and Athletics" and on "The Voice and its Physiology," are extracts from lectures delivered before my classes at the Woman's Exchange, by Samuel.R. Elliott, M. D., of this city.]

Gymnastics and Athletics.

The subject of exercises for the purpose of developing muscular power and human agility and endurance, is one of the oldest of which we have any knowledge, and certainly was one of the first to excite attention in the days of the young world.

The pages of sacred, as well as profane, history abound in stories and incidents commemorative of great physical achievement, and holding up the performers of such feats as objects of admiration and even of adoration, as there is little doubt that many of the gods of fable and mythology were once merely men whose prowess was the theme of song and story, till, long after death, they became canonized in popular tradition, and eventually deified in popular worship. This generous admiration of the strong, the active, and the brave, seems to have been not only common to all primitive races, but to have continued with unabated ardor down to the present high stage of civilization in the capitals of Europe, and even of

our own country. The performances of Samson with the lion and the jawbone, and the sling of David, are matched by the myths of Hercules worship. The wonder workings of Thor and Odin in Scandinavian lore, the arrow of William Tell, the sword of Bernardo del Carpio, have each filled their share of popular appreciation, and passed through the various stages of popular consecration, drifting easily from folk-lore to tradition, until advancing intelligence relegates them to heroic literature.

The first people to practice gymnastic exercises, save in war and rapine, were the Greeks. The Olympiads were the most ancient and solemn of all their festivals, and drew together vast numbers of people not only from Greece, but from many neighboring islands and countries; indeed, so important were these festivals deemed that the Greeks computed their time from their occurrence, as did many other nations. Those games purely gymnastic, and taking place wholly without apparatus of any kind, were solemnized at about the time of the full moon, after the summer solstice, and lasted five days. The exercises consisted of running, leaping, wrestling, boxing, and throwing the quoit, called altogether pentathlon or quinquirtium. Besides, there were races of chariots and horses, and contests in poetry, eloquence and the fine arts, the only reward permitted being a crown of olive, which was supposed to be in memory of the labors of Hercules, accomplished for the good of mankind, and seeking no reward but an approving conscience; besides, it was somehow believed that so

trifling a reward would stimulate courage and virtue, and excite a nobler emulation than more sordid motives. Every contestant was obliged to practice ten months before being admitted as a candidate for honors. No criminals or impious persons, nor even the relatives of such, were allowed to present themselves as candidates. The preparations for these exercises seem to consist principally of rubbing with oil, frequent ablutions, and the observance of an almost ideal cleanliness.

For many Olympiads these exercises were reserved exclusively for men, and so severe was the discipline that any women found on the grounds were treated with great indignity, and even cruelty, some of them being flung down the rocks. Later on, however, we are informed that women not only asserted with success their right to be present, but even secured places as contestants, in some instances winning the crown of wild olive against all competitors.

It is to the influence of these games that many poets and historians are wont to attribute the strength and symmetry of the human form in those days, which, as handed down to us in marble, still excite most extravagant enthusiasm,—a symmetry and harmony of lines which has certainly never been surpassed, and which doubtless was in some measure the result of superb healthfulness of mind and body. The climate, also, probably, was contributory to the general weal of mind and body, for we have abundant testimony that the summers were less warm and relaxing in those latitudes than they are now. Even Horace, in his Ode

to Thaliarchus, nearly two thousand years ago, describes an old-fashioned winter of New England as prevailing then at Rome.

During the dark and cruel ages that followed the fall of Rome, gymnastics as an amusement or as an art seemed to languish. True, the knights and warriors of every degree practiced without stint any system of athletics which might tend to make them strong and victorious; still, the games of that nature were more in vogue with Friar Tuck or Robin Hood than with Ivanhoe or Front de Bœuf. We hear of many feats of arms and daring hearts, but they were for the staying of foes, so that the crown of wild olive was replaced to the victor by one of laurel, and even the glowing incident of the Noche Triste, called "Salto de Alvarado," was to escape from a pursuing foe. So we may assume that the art and spirit of gymnastics slept through the dark ages to be revived only within our own century.

The establishing of a gymnasium as part and parcel of an educational system, is of sufficiently ancient date, but, for the universality of its application, I believe the Germans claim precedence. There is probably much difference of opinion as to the efficiency of the German methods at the gymnasia or preparatory schools for the universities, but I merely quote Matthew Arnold, himself a professor at Oxford, when he says of these universities and their gymnasia: "It is too much to hope that our English schools will ever equal or even approach them."

Here the development of mind and body is made

to go hand in hand with such surprising results that we are driven to wonder, first, how so much study and concentrated effort can be endured without injury to the body, and again, how students who devote so much of their time to the gymnasium and the "fechtboden," or fencing-school, can possibly find time for Their exercises are much less severe than ours, many of the rougher college games being eliminated, and more time is spent during fine weather in long walks, pedestrian trips during vacation, or wandering over the fields with one or more professors, examining local flora or fauna, occasional riding on horseback, or even dancing and swimming. It is needless to mention the very fine results obtained from this combined system of training; one has only to refer to the galaxy of illustrious men in every department of thought, and of all nations, who are wholly or in part the product of the German universities, and any one who has listened to a lecture from the average German professor, will recognize in the sturdy vocal cords and sturdier lungs of the speaker, evidences of a vitality which reflects credit upon the methods of his alma mater. Another place where the advantage of method in gymnastical training is noticeable is the Prussian army; there, every form of athletic performance is insisted on, from handling a musket to swimming a river, from scaling a wall or a mountain to riding the mechanical horse. "Strategists of the blackboard" in the school-rooms instruct the humblest, and nothing is neglected, nothing overlooked.

And what are the results? Already has the organ-

ization passed into history as the most perfect the world has ever known, so that the fall of France was a foregone conclusion from the striking of the first blow; and yet the men who conducted this grand army to assured victory were far advanced in years; several of them, including the commander-in-chief, being over seventy years old. There stands Von Moltke, of late years the first military figure in Europe. recently buried the last of our own leading war-heroes. He had been retired for a number of years, as too old for service, and yet, Von Moltke was born, reared, educated, an officer, and, I believe, married, before Sherman was born. Such vitality, as evidenced by unimpaired powers at such an advanced age, is by no means rare in that army.

Being desirous of studying the effects of gymnastics, and athletics in general, upon the physical system, I thought it best to go to headquarters. I mean, to investigate the subject among those who made gymnastics a profession; to look among the athletes of the clubs, the professional prize-fighters, pedestrians, oarsmen, and the like, in order to see whether these matters, carried to excess, sometimes even to the uttermost limits of human endurance, could have a good effect upon the health, or be considered as conducive to along life. My opportunities for investigation might be considered very good. I had been a medical officer on Blackwell's Island. I had practiced surgery for years in the army. I was surgeon of police, and was in many ways so placed as to have unusual facilities for observations of this subject.

I very soon learned that the motto for all this class might most appropriately be called, "A short life and a merry one." One by one nearly all the champions of my boyhood's days were gathered to their fathers (if they had any) usually long before middle-life. Runners whose fleetness and endurance and breathing powers had been the theme of much wondering comment; bruisers, champions alike of England and of America, men whose prowess and toughness excited the wonder of two worlds, joined the long procession of the dead and the forgotten. Names renowned among the circus performers of my earliest boyhood were borne only by their children or successors, before I had ceased to be a medical student.

During my sojurn at the workhouse and at the hospital on Blackwell's Island, I witnessed a mournful funeral array of these people whose names were once famous as athletes, billiard-players, minstrels,—what they, poor fellows, would have called "artists of humbler grades,"—these would come there to die, sometimes, it is true, from the effects of dissipation,—more often of consumption, for this disease seems to be the bane or, rather, the fate of the athlete. Who would have supposed, on witnessing, or even hearing, of the struggle between the two athletic giants of Europe and America, that in a very few years they would both die of the same disease, and that disease consumption? I remember witnessing, many years ago, two deaths on the same day, of the same disease; one a languid, hysterical girl, who had never taken any exercise in her life, and now she had come to the hospital to die, a victim of tight-lacing, late hours, and feminine dissipation; the other, one of the most famous gymnasts of Europe, a victim to overwork; both about the same age, and both had reached the same goal by such opposite paths!

Not only do the lungs suffer from the strain and exposure incident to violent exertions, but the heart, the kidneys, and the nervous system are so liable to be affected that at one time several of the most reliable of the insurance companies positively refused to insure persons who engaged in rowing-matches and similar athletic sports, alleging that although, ordinarily speaking, such persons, being young and strong, would naturally come within the category of good risks, yet so great was the danger to the heart's valves and to the nervous system from the emulative straining, that they did not care to insure them. What boy does not remember the dramatic ending of the international rowing-match some years ago, when Renforth, the English champion, fell dead amid his crewthe finest men in Europe—at the moment of assured victory!

So, now, having dwelt at some length on the influence of what might be called pernicious gymnastics, or those which, on the whole, have a pernicious and exhausting effect upon the majority of the people who practice them, the question naturally arises, "What form of exercise is, on the whole, most conducive to health and long life?" If running, rowing, or boxing, even when carried nearly to perfection by those who make a trade of athletics, are found to be dan-

gerous or injurious to lungs and heart, what substitute can be adopted which will bring the hue of health to the cheek and its glow to the heart? I answer, There are many light exercises devised for that purpose, and many which you find ready-made to your hand. We have gone to statistics to find that the brutal prize-fighter is a short-lived animal; the same source of information will tell you that the graceful dancingmaster is one of the most long-lived and healthy, and that, notwithstanding the levity of his aims, he usually attains a good age, and eventually dies well-to-do and Many years ago, having a patient who bore a prominent part in various organizations connected with prisons and their reform, I instituted with him some inquiries as to the exercise permitted or enforced in various penal institutions. The information given in almost every case was to the effect that exercise of the treadmill order, enforced amid lugubrious and hateful surroundings, was a failure—the prisoners not only lost flesh, but actually became weaker because of the irksomeness of that task which was forced upon them, and it was only by the institution of light games and of brisk walking that these unfortunate people could be kept in average health. All this goes to show that something more is needed than the mere lifting of weights, the swinging of dumb-bells or of Indian clubs. My experience has shown me that some form of exercise which combines grace of movement with a correct system of breathing. and which cultivates presence of mind, as in fencing or horseback riding, would be far preferable to any

of the ordinary gymnastic systems which require violent and concentrated effort.

For many years horseback exercise was regarded as almost a specific in chest-diseases; the fresh air, the movement, without exhausting effort, the sympathy and companionship which one naturally enjoys with a good horse, are all most useful, and many are the people whose weak lungs have been stayed by this remedy. But it is open to several objections. It is necessarily expensive, and so beyond the reach of those who most require health and strength. some cases and conditions of body it might prove injurious, and is positively forbidden in certain others, as in threatened visceral disease of any kind. various inhibitions narrow the range of exercises for women and the less robust men, so that little is left to choose from. Of course, healthy boys, in college or out, must be expected to enjoy their football, rowing, and other violent exercises during the active period of boyhood or early manhood. While all this. even with certain manifest dangers, is, on the whole, beneficial for the hardy ones, the milder forms of exercise are to be recommended to persons of less robust frame, male or female; and I would especially commend all exercises of an artistic or æsthetic character which benefit the mind and impart grace and precision to the movements of the body; exercises in which all unsightly straining, all perilous or pernicious efforts, are avoided; studies which leave the body unwearied and the mind refeshed.

The Voice and Its Physiology.

Among the many anecdotes related of the elder Booth is one familiar to all playgoers of the last generation, to the effect that perhaps the greatest sensation ever created by that matchless artist was his recitation of the Lord's Prayer in private, among a few choice friends, done without make-up, or scenery, or gestures, or even changes of facial expression. This marvellous rendition dwelt for fifty years in the minds of some of his auditors as a most extraordinary study of reverential awe and passionate devotion, and this from a man who was, perhaps, a believer, but by no means a religious man.

All literature teems with accounts of the achievements of the human voice, and our daily experiences show most conclusively how that organ, properly used, can terrify or cajole, persuade, convince, even against reason, evidence or common sense. The average criminal trial of the courts is but a duel between rival talkers! What is a political meeting but a concourse of persuasive speakers! Even the salesman who commands the highest salary, is usually possessed of a fluent tongue and an agreeable voice. The pulpit trusts much to doctrine, to logic, to faith, but more to the eloquence of the pastor, whose voice is regarded by his delighted hearers as conveying in fitting tones a

message from Heaven. It is certainly held by many that the only thing which always betrays a bad man is his speaking-voice. Of course, we know that inexperience will find there, as elsewhere, some means of being taken in, as modest merit timidly averts the eye, while brazen guilt stares you calmly in the face. The false ring of the professional flatterer may sometimes outvalue the hesitating utterances of sincerity. Still, we all know how strong a confidence is inspired by a breezy, frank, hearty utterance. A man or a woman who goes through life handicapped by a bad voice or an incorrect method of using it, will always labor under disadvantages more serious than might be incurred by many moral obliquities.

I suppose it is natural for a people who are, according to Oliver Wendell Holmes, fed on codfish, east winds, and white bellied pickles, to suffer from perennial catarrh, which alters the pitch of the voice and turns prayer into a canting whine. True, it is claimed on behalf of the seaside populace that the Kentish middle classes enjoy the same nasal distinction, that the Mayflower brought over the Yankee twang ready made, and that New England has, with provincial fidelity, embalmed the tones of the mother country as she certainly has many words and phrases of local slang, long since passed away and forgotten in Kent, England.

Still, the disagreeable fact remains that our voices are more penetrating than musical, and unless we are carefully instructed in the management of our vocal organs, we can be picked out as Yankees in any part of the world. That some of this is due to climate is evidenced by the fact that the voices of the people in Georgia, in Louisiana, and in the other Southern states, where the air is balmy, are softer than with us.

Strange to say, negroes seem to have voices which might be warranted to keep in any climate. Much as Sambo dislikes snow, he does not allow it to affect his utterances; and the darky of Boston is as soft-voiced as the freedman of Charleston.

It is true, however, that sonorousness by itself is not necessarily a proof of health, or even of good lungs, many consumptives having a deep, almost cavernous, speech which, in them, is a pathetic mockery; and, on the other hand, it is well known that many athletes are notably deficient in voice, owing to diversion of the vital energies in other directions. I knew an instructor in the gymnasium, one of the most remarkable gymnasts of the country, who was obliged to take elocution lessons because his voice was so weak that his pupils could not understand him. I may add that in his case the cultivation of the voice seemed to add greatly to his prowess in other directions, as though restoring the equilibrium to his partly-neglected, partly-overworked system. I have often witnessed similar results.

Having dwelt at some length on some of the advantages of having a good voice, let us consider what may be done toward securing that excellent boon. Alas! I fear there is no royal road. True, attention to the general health may do something; the removal, by surgical

or other means, of many physical obstacles; the specific treatment of the throat by electricity, massage, or revulsives, can often accomplish something. Judicious care as to diet, clothing, habits of exercise, and other matters conducive to the general well-being, doubtless may and usually do have a good effect; but none of them approach in efficacy the scientific exercise of the organs of speech and song under a competent instruc-So-called natural methods will not do. consist merely of substituting the crude notions of the neophyte, for the proved efficiency of the methods of To the untutored plowboy what seems the natural method of walking is to slouch gawkily along; to the untutored maid of Cranberry Centre, natural singing is to squawk through the nose. So, to be brief, much is due to nature, which provides a good organ, much to art, which provides the resonance that comes of judicious practice, just as the playing of thirds and sixths will improve a new violin.

The throat should be bathed in cold water every morning and evening, and then rubbed till the capillary circulation is fully established, as will be seen by the healthy glow suffusing the neck and mantling the cheeks. Prof. Sbriglia, of Paris, to whose watchful care so many singers attribute their gains and so many consumptives their improved health, makes his pupils add cod-liver oil and dumb-bell exercises to their repertoire. But, after all, such common sense methods have no nationality, and one need not cross the seas to learn that health and strength are useful adjuncts in cultivating the human voice. All un-

necessary muffling should be avoided. Furs about the neck, except in very cold weather, are apt to promote perspiration, which condition is often followed by a chill from evaporation that may produce alarming results; besides, all muffling has a tendency to weaken the resisting power of the skin. Of all measures to prevent the taking of cold and to restore a proper distribution of circulation, there is nothing more effective than bathing the feet in cold water at bedtime, and afterward rubbing them with a coarse towel until thoroughly warm.

If, in spite of all reasonable precaution, a cold should steal a march upon you, it will ordinarily come in the form of coryza—a cold in the head, an inflamed and irritated condition of the mucous membrane of the nostrils and throat, including, frequently, the eyelids. This condition, if left to itself, usually lasts from ten to twenty days, if it go no further; but it is easily controlled, in most cases, by the administration of drop doses of tincture of belladonna every twenty minutes, for two or three hours; then a few muriate of ammonia lozenges, a gargle of warm water softened with a little bicarbonate of soda or borax, a mild spray of diluted listerine, will generally suffice. Should a cold, heeding no entreaties, continue to advance till tonsilitis or bronchitis come in view, it is best to have recourse to the inevitable doctor.

I am often asked by persons desirous of cultivating the singing or the speaking-voice, what diet would be most effective in maintaining the strength and facility of the vocal organs. On that subject authorities differ

somewhat, though all are agreed that a diet which is light and easily digestible, as simple as is consistent with abundant nourishment, is usually the best. A renowned Italian professor on being asked what were the prominent features in the conduct of life among the sweet-voiced fraternity of Italian singers, replied: "Poverty seems an unfailing prerequisite there. Only among the poorer classes can be found that abstemiousness, that habit of labor, that incentive to exertion and to emulation which will make a great singer." And when I remembered the severe studies and severer privations of Adelina Patti's childhood, enforced by parents who were themselves Italian singers—that, too, in this luxurious civilization,—it seemed as if there might be something it. Helmholtz declares that the greatest of blessings to Germany is her poverty, as its fruit is frugality, industry, modesty, and the habit of patient labor. Well, perhaps.

The rarest of voices, the tenor, appears to grow to perfection only in Italy. True, other countries produce prima donnas, sopranos, contraltos, bassos, and even here and there a tenore robusto; but for a tenore di grazia the climate and soil of Italy alone furnish the conditions. So remarkable has been the dower of sweet singers which Italy has lavished upon the world, that fantastic theories of all sorts have been suggested as to the cause. Some thought it was ozone—that a peculiar style of that article was generated in that volcanic soil; some even proposed to reproduce it here artificially for a consideration! Others thought it due to the national diet, mostly figs

and macaroni. Others, with more reason, attributedit to a system of vocal culture practiced by their professors, and on this belief many of all nations flocked to take lessons of Lamperti and others, who throve and fattened on this belief.

If Italian singers excel in sweetness of singing-voice, the singers of the North countries excel in power. When Christine Nilsson first sang in "Faust," at the Grand Opera, in Paris, they were obliged to add to the orchestra ten contrabassi and six harps, and even then the Swedish singer soared far above them all and seemed to be singing alone.

Jenny Lind had a wonderful voice in her high register, and was matchless in such melodies as the "Swedish Mountain Song;" but failed lamentably when attempting the sombre pathos and low, impassioned notes of "Casta Diva."

Tradition has not been wanting when the mystery of the wonders worked by song was to be celebrated. Who does not remember the story of Alessandro Stradello. How when he incurred the displeasure of the Mafia of that day, three assassins were deputed to murder him at the door of the Cathedral where he was to sing that marvellous creation, "Pieta Signore." How on hearing the tones of that voice vibrate magnetic, these bravos dropped their knives to cross themselves, and before the emotional trance was over, their unconscious victim, Stradello, had passed unmolested to safety. How when Pacchierotti sang, the orchestra that should have accompanied him forgot to play, but not to applaud. How the same and

similar marvels are stated on good authority to have occurred with Pasta, with Catalani, Farinelli, Rubini. How when Catalani sang "Hope told a flattering tale," at a concert in London, her lower tones were drowned in the sympathetic sobs of her audience. Even diplomatic honors have several times been conferred on great singers. Among others may be mentioned Farinelli, who, having become a member of the household, was on several occasions entrusted with important missions, and, it is said, acquitted himself extremely well.

Voice is sound produced in the larynx, caused by the vibration of vocal reeds when struck by a current of air from the lungs. It is divided into phonation and articulation. Phonation is the simple utterance of vocal sound. Articulation is when the vibrating column of expired air is modified by being broken up into jets or syllables. Phonation can occur without articulation, as witness the noises made by certain birds, animals, or even the cries of Indians. Also there may be articulation without phonation, as may be observed in whispering.

The organs of voice are threefold in function, and are divided into a motor, a vibrator, and a resonant element. The first supplies air-blast or motive power from the lungs; the second, tone or vibration; the third, quality of voice. The motor element is the lungs and windpipe, with their respective muscular appendages. The vibrator element is the actual organ of voice, the glottis, with its vibrating lips. The resonant element comprises the parts above the glot-

tis, ventricles, false cords, epiglottis, pharynx, nose, mouth, bone cavities of the face, etc., and below the glottis, the chest. Voice is generated solely in the larynx; so the phrases, "head-voice," "chest-voice," etc., refer solely to the sensations of the singer.

Sound is produced by a vibrating body, which creates a movement in the surrounding atmosphere, very much as a stone thrown into the water makes ripples. Particles of air propagate the impulse one to another, until the wave thus formed reaches and impresses the auditory nerve. This impression thus flashed inward to the brain is there perceived as sound.

The greater the number of vibrations in a given time, the higher is the tone; so that if the larynx be watched, it will be observed that the cords are more and more tensely stretched as the voice rises in pitch, while, on the other hand, they become less and less tense as the voice descends.

Timbre of voice may be called physiognomy of voice. Helmholtz calls it *Klang-furbe*, translated by Tyndall as "clang-tint." Mackenzie resorts to the simpler Saxon of his fathers and speaks of quality of tone.

It is a singular fact that we owe the discovery of the laryngoscope not to a mechanician, not to an inventor, not even to a physician, but to a celebrated singing-master, Garcia, who had spent a lifetime in training the human voice, with such success and renown that most of the grandest voices of his time were submitted to him for development.

Before the discovery of the laryngoscope, the word "register" was capriciously and somewhat loosely

